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PUBLIC HEALTH

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UPGRADING PRIMARY MEDICAL CARE TO THE INHABITANTS OF BASHKIR ASSR

Moscow SOVETSKAYA MEDITSINA in Russian No 7, Jul 82 (manuscript received 7 Jan 82) pp 63-67

[Article by M. Kh. Kamalov and M. Ye. Petrov, Bashkir Republic Clinical Hospital (chief physician M. Ye. Petrov, doctor of medical sciences), Ufa]

[Text] In the years of the 10th Five-Year Plan, 44.6 million rubles were acquired in Bashkiria for the construction of public health facilities. A total of 4465 beds (126% of the plan) and polyclinics that can handle 5700 visits per shift (170% of plan) have been made operational. The allocations for health care increased by more than one-third under the 10th Five Year Plan, as compared to the 9th, and constituted 173.7 million rubles in 1980; scaled to one inhabitant they increased from 32.4 to 42.5 rubles.

Public health workers have made some achievements in implementing the decree of the CPSU Central Committee and USSR Council of Ministers "On Measures to Further Improve Public Health Care." Bed availability increased from 109.0 to 122.4/100,000 population, physicians from 22.7 to 28.6 and paramedical personnel from 79.2 to 93.4. The average size of central rayon hospitals has grown from 216 to 273 [beds]. The number of outpatient visits per person increased from 10.9 to 12.7 in urban areas and from 2.9 to 4.6 in rural regions. More than 36 million visits were paid to physicians in extramural institutions in 1980, and one-third of them were for preventive purposes. Coverage by periodic medical examinations constituted 45.2% of the population.

At the present time, medical care is rendered in this republic in 60 special fields (22 in rural areas). Special attention is devoted to improvement of the primary level of health care. In 5 years, the number of medical districts [internists] increased from 460 to 700, shop [industrial] districts from 245 to 300 and pediatric from 483 to 635. A total of 154 feldsher and midwife centers have been built. Medical districts have been established in 18 rayon centers of rural regions, which service the inhabitants of rayon centers and registered [attached] districts. The mean number of inhabitants per internist district decreased from 3500 to 2400, per pediatric district it diminished from 1020 to 842. The number of medical offices for adolescents increased from 57 to 107.

Constant improvement of dispensary supervision is the main function of the polyclinic level. The Bashkir Ministry of Health has issued methodological

recommendations on dispensary care of industrial workers and those in the main agricultural occupations. In 1979, there was a Bashkir scientific and practical conference dealing with improvement of the dispensary method, and dispensary offices were opened.

The work of polyclinics includes indicators of quality and efficacy of dispensary care: coverage by dispensary supervision, enrollment of the sick, promptness and accuracy of diagnosis and therapy, planning of follow-up, work capacity and health index of those under dispensary supervision. Enrollment for dispensary care is done on a five-group system. All this has been instrumental in increasing considerably the contingent covered by dispensary care. The indicator of dispensary coverage for 1980 (per 1000 population) constituted 602.0, 452.0 of whom were in good health (periodic medical examination) and 141.0 were sick (versus 101.2 in 1975). A wide level of dispensary observation of patients with the principal diseases (Table 1) was reached in 1980 at the therapeutic and preventive institutions of this republic; the indicators of preventive work have also improved thanks to increasing the number of people covered by periodic and preventive examinations (Table 2). A total of 80% of the republic's population is covered by various forms of preventive examinations.

Table 1. Dispensary coverage of patients suffering from the main diseases  
(% of detected cases)

Disease	Covered by dispensary supervision
Thyrotoxicosis	84.9
Diabetes mellitus	99.3
Glaucoma	99.1
Rheumatism	98.3
Essential hypertension	71.5
Acute myocardial infarction	99.8
Ischemic heart disease	63.3
Peptic ulcer	96.9
Chronic nephritis	94.4

Under the 10th Five-Year Plan, preparations were made in Bashkir ASSR to change from dispensary care of certain contingents to dispensary care of the entire population. For this purpose, a plan was worked out to enroll the entire population of the rural Tatyshlinskiy Rayon for dispensary supervision through the work of local medical workers and physicians of the Ufa Municipal Hospital No 8.

Specialization, continuity and work in stages are the distinctive features in development and refinement of primary medical care in Bashkir ASSR.

Large multispecialty medical sections with polyclinic departments, which have specialized offices, have been organized to render medical care to workers at industrial enterprises and in building organizations. Special importance is attributed to a standard system of work for polyclinic departments, as the prehospital stage of medical care, with sanatorium-preventoriums that perform the function of the preventive and rehabilitation stage. At the present time, there are 48 sanatorium-preventoriums with a total of 5000 beds in this republic.

The national program of controlling cardiovascular diseases is being implemented well by means of the combined work of the cardiological and rheumatological service, which consists of 5 cardiological emergency medical brigades, 19 cardiological brigades, a cardiological dispensary with a 300-bed hospital, as well as around the clock remote consultant cardiological consoles at the Republic Clinical Hospital and other medical institutions. Use of the remote consultation cardiological consoles has made it possible to rapidly establish the diagnosis of heart disease, institute immediate treatment of myocardial infarction and other heart diseases and pursue dynamic observation of patients. In the 2 years that the cardiological console has been used, a saving of 126,800 rubles has been made at the Republic Clinical Hospital alone as a result of reducing the number of trips made by medical specialists in the air medical service.

Table 2. Periodic and preventive medical examinations (1975-1980)

Type of examination	Year	
	1975	1980
Periodic medical examination, %	95.5	96.0
Special-purpose screenings (per 1000 population) for detection of:		
tuberculosis	825.9	833.0
malignant neoplasms	595.4	614.2
syphilis	218.0	295.2
gonorrhea	136.7	218.2
fungal and skin diseases	665.4	734.2

Continuity in the work of the above-mentioned departments with hospital departments and the rehabilitation department of the "Zelenaya roshcha" [Green Orchard] Sanatorium has made it possible to rehabilitate 2500 people since this department was opened (1978). Thanks to treatment administered in stages for patients who have sustained myocardial infarction, 70% of them have returned to their former jobs.

Special attention in development of primary care is attributed to emergency medicine. There are 1 station and 63 departments of ambulance and emergency medical care at urban and rayon hospitals. New emergency medicine buildings have been put in operation in Ufa, Sterlitamak and Kumertau. Specialized brigades (cardiological, neurological, traumatological, pediatric and others) have been formed.

The problem of providing ambulance and emergency medical care not only to the inhabitants of rayon centers, but attached districts, was resolved under the 10th Five-Year Plan.

In 1980, an experiment was conducted on rendering emergency medical services to all of the inhabitants of Belebeyevskiy Rayon, and a plan was prepared for introducing this knowhow to 12 cities and rayons in 1982, and the rest of the republic's rayons under the 11th Five-Year Plan. The Bronze Medal of the Exhibition of Achievements of the National Economy of the USSR was bestowed to the Ufa Emergency Medical Station for its performance.

Table 3. Performance indicators of laboratories in therapeutic and preventive institutions of Bashkir ASSR

Indicator	Year	
	1975	1980
Total tests performed, thousands	13705.5	18452.2
Breakdown: hematological	4662.6	5775.5
cytological	71.4	178.0
biochemical	1152.1	2195.2
immunological	2006.6	2405.1
Number of tests:		
per 100 visits to polyclinic, total	28.5	35.0
" " " " " in rural areas	13.7	30.0
per hospitalized patient	7.5	7.9
" " " in rural areas	3.6	4.1

The effectiveness of health education has improved and there has been a decrease in number of patients who required emergency surgery but were hospitalized with delay thanks to the larger number of surgeons on the primary level. Thus, hospital admissions 24 h after onset of disease constituted 30.2% of the patients with intestinal obstruction (versus 36.2% in 1975), 21.6% with acute appendicitis (24.8% in 1975), 37.5% with acute cholecystitis (43.7% in 1975) and 20.1% with ectopic pregnancy (26.4% in 1975). There was a corresponding decline in mortality: from 12.7% in 1975 to 11.1% in 1980 in cases of intestinal obstruction, from 12.7 to 0.2% for acute appendicitis, from 2.8 to 2.5% for strangulated hernia, from 8.9 to 44% for acute cholecystitis and from 0.7 to 0% for ectopic pregnancy.

The department of emergency and scheduled consultant services at the Republic Clinical Hospital is an important element in rendering primary care. In the years of the 10th Five-Year plan, the physicians of this department made 7815 flights and trips to cities and rayons; 4210 seriously ill patients were brought to therapeutic-preventive institutions; 6585 patients had consultations, 1345 patients underwent surgery and 1075 liters of blood were furnished.

In Bashkiria, the unification of urban and rural health care has been finalized, so that large specialized departments and specialized offices could be set up at the polyclinics. At present, the rural residents of these areas take advantage of specialized medical care not only on the principle of their residence, but depending on the disease.

By establishing 44 interrayon specialized departments and offices, it has become possible to reorganize the work of republic-level medical centers to activate their activities in different localities. Since 1978, of the total number of consultations (227,109) provided by specialists of medical centers, 101,386 (44.7%) patients were seen at the Republic Clinical Hospital alone.

In the years of the 10th Five-Year Plan, 287 specialized offices and laboratories have been opened as part of central and rural district hospitals; 7 unprofitable rural district hospitals were reorganized into rural medical walk-in centers and 6 into feldsher-obstetric centers. There has been an increase in laboratory tests in both outpatient-polyclinic departments and hospitals (Table 3).

Medical care of women and children on the primary level is improving. Specialized office hours have been instituted in women's consultation centers for prevention and treatment of interrupted pregnancy, sterility, endocrine disturbances, children's gynecology, cardiovascular pathology and pregnancy with immunological conflict. Polyclinic care is rendered to children in 26 special fields (traumatology, pulmonology, cardiology, rheumatology, gastroenterology, children's surgery, orthopedics, resuscitation, etc.).

The steps taken have improved the performance indicators of therapeutic and preventive children's and obstetrical institutions in this republic (Table 4).

Table 4. Summary indicators of performance of therapeutic-preventive children's and obstetrical institutions of Bashkir ASSR (1975-1980)

Indicator	Year	
	1975	1980
Regular observation of infants up to 1 year old, %	56.5	72.1
Mortality within first 24 h of life	20.5	16.4
Infant mortality per 1000 births	21.7	20.3
"    "    "    "    "    "    in rural areas	22.5	18.8
Incidence of eclampsia per 10,000 births:		
in urban areas	7.6	3.1
in rural areas	7.4	4.2
Obstetrical hemorrhages per 1000 births:		
in urban areas	256.5	187.6
in rural areas	332.2	240.9
Early enrollment of pregnant women (up to 12th week)		
for dispensary supervision, %:		
in urban areas	75.8	76.9
in rural areas	75.3	77.5
Examination of pregnant women by internist, %	97.8	99.0
Perinatal mortality, %	16.3	15.8
Extramural abortions, %	13.9	12.0

In view of the great importance of control of traumatism and its sequelae, the Bashkir Ministry of Health pursued purposeful work to organize specialized hours to see traumatological and orthopedic patients, traumatological centers that work in conjunction with hospital departments (510 beds).

There has been a drop in mortality among the population of employable age (as compared to 1975), from 0.2 to 0.13/1000 population due to infectious diseases (from 0.14 to 0.1 for tuberculosis), from 0.01 to 0.006 due to diseases of the blood and hemopoietic organs, from 0.008 to 0.004 due to influenza and acute respiratory diseases and from 0.13 to 0.1 due to industrial trauma. In the same period, there was a decline in infectious morbidity referable to acute intestinal infections, bacillary dysentery and measles.

For the complex development of the material and technical base of Bashkir health care, there are plans to open polyclinics with a capacity of 8000 visits per shift. One more emergency medical station and an emergency hospital with 800 beds will be constructed. The number of people per medical district will decrease to 1700 and to 800 per pediatric district (starting in 1982).

Considerable funds have been allocated for the construction of sanatorium-preventoriums (2000 places), in which dispensary patients will be treated without leaving their jobs, in order to strengthen industrial health care.

In rural areas, the construction of 14 central rayon hospitals with polyclinics will assure further development of specialized extramural care. There are plans to expand the network of rural doctor's offices, feldscher-obstetrical and feldscher centers. Even now, work is being done to increase the role of rural paramedical personnel in implementing dispensary measures, vocational guidance, monitoring improvement of sanitary condition of villages, food-handling, trade facilities, garbage trucks, field camps, etc. A preventorium will be opened at each livestock farm for preventive physiotherapy without leaving jobs.

Refinement of primary care of mothers and children will hold a special place. There will be expansion of the obstetric-gynecological service; the size of wards will be brought up to the health [sanitary] standards; 20 women's consultation offices, 7 children's gynecology office and 4 interrayon consultation centers for sterility and interrupted pregnancy will be opened; the children's polyclinics will be fortified with medical personnel.

Under the 11th Five-Year Plan, 181 specialized offices will be opened in polyclinics; rehabilitation departments will be organized at large polyclinics. Various offices will be created: for prephysician visits, examination, dispensary supervision and fluorography.

The medical personnel of Bashkir ASSR will apply all their efforts to successfully fulfill the plans outlined by the 26th CPSU Congress.

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## HEALTH STATUS AND WORK CAPACITY OF PENSIONERS LIVING IN RURAL AREAS

Moscow SOVETSKAYA MEDITSINA in Russian No 7, Jul 82 (manuscript received 31 Mar 81) pp 74-78

[Article by A. A. Dyskin and M. V. Korobov, candidates of medical sciences, Leningrad Scientific Research Institute of Expert Determination of Work Capacity and Vocational Guidance for the Disabled]

[Text] The existing shortage of manpower resources in agriculture raises the important problem of searching for additional manpower by means of involving in labor individuals who are not engaged in socially useful work (housewives, disabled, pensioners, etc.). In rural areas, the most realistic manpower reserve is referable to individuals on pension because of their age, the share of which is considerable in the structure of rural population. Involving them in work that is within their power is not only of great economic and national significance, but an important financial and moral incentive for the pensioners themselves. Properly organized work, selected in accordance with the functional capacities of the elderly person, is instrumental in improving the adaptive and compensatory mechanisms in the aging body, creates conditions for active longevity (Ye. I. Stezhenskaya; A. V. Dmitriyev).

In order to plan and purposefully develop measures in order to involve more extensively pensioners in socially useful labor, and to organize work that they are up to, one must know what the actual manpower reserve is in the pensioner group, the size of which is largely determined by the health status and fitness for work of individuals of retirement age who live in rural regions of the involved administrative territories.

For this purpose, we studied the physical condition and fitness of 891 pensioners ranging in age from 50 to 69 years, who lived in a rural area and were on the rolls of social security departments. Of the total number of pensioners, 205 (50 men and 155 women) were still employed and 686 (77 men and 609 women) had stopped working. The results of a comprehensive expert clinical work-up of the group of pensioners by a team of expert physicians, with use of various methods of examination (roentgenological, electrocardiographic, clinical, biochemical, etc.), served as material for our analysis.

The results of this complex examination enabled us to determine a number of distinctions in physical condition and work fitness of pensioners, which are determined by sex, age differences, as well as their involvement in socially useful labor.

Table 1.  
Incidence of chronic diseases in pensioners  
living in rural area (per 1000 pensioners  
of the same age and sex)

SEX	AGE, YEARS	PENSIONERS		
		EM- PLOYED	UNEM- PLOYED	TOTAL
<b>MALE</b>	60-64	2555.6	3500.0	3052.6
	65-69	3071.4	3730.8	3500.0
<b>FEMALE</b>	50-54	2222.2	2901.8	2606.7
	55-59	2460.0	3290.9	3031.3
	60-64	2714.3	3451.0	3292.3
<b>BOTH</b>	65-69	2857.1	3660.1	3626.5
		2603.2	3541.9	3281.9

The incidence of chronic pathology averaged 3281.9/1000 pensioners. The share of healthy pensioners constituted 4.1%. Of those that were sick, 9.6% suffered from one disease, 21.9% from two, 35.4% three, 32.8% from four or more diseases. The incidence of chronic diseases was higher in women in the same age groups than in men (Table 1). With increase in age the incidence of diseases increases. The lowest incidence was observed in the 50-54-year group of women who received a pension on the basis of having many children, while the highest was referable to the 65-69-year group.

Pensioners who are less burdened with chronic pathology continued to work, as indicated by the lower incidence of chronic diseases among employed pensioners as compared to unemployed ones. This pattern was manifested in all age groups of both men and women. With increase in age of working pensioners, the incidence of chronic pathology among them increased, as it did in those who were unemployed. This shows that participation of pensioners in socially useful activities is determined not only by their health status, but a number of social and socio-psychological factors.

Table 2. Incidence and structure of chronic pathology referable to different classes of diseases among pensioners

CLASS OF DISEASES	EMPLOYED		UNEMPLOYED		TOTAL	
	PER 1000 PEN- SIONERS	% OF ALL	PER 1000 PENS.	% OF ALL	PER 1000 PENS.	% OF ALL
<b>TUBERCULOSIS</b>	19.5	0.7	11.7	0.3	13.3	0.4
<b>NEOPLASMS</b>	9.7	0.4	21.0	0.7	19.9	0.6
<b>ENDOCRINE AND METABOLIC DISEASES</b>	151.1	5.8	169.1	4.8	162.8	5.0
<b>BLOOD DISEASES</b>	4.9	0.2	7.3	0.2	6.6	0.2
<b>MENTAL DISORDERS AND NEUROSES</b>	53.6	2.0	48.1	1.4	48.7	1.5
<b>DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS</b>	321.8	12.4	266.7	7.5	275.7	8.4
<b>DISEASES OF CIRCULATORY ORGANS</b>	1135.6	43.6	1741.5	49.2	1581.2	48.2
<b>DISEASES OF RESPIRATORY ORGANS</b>	166.0	6.4	167.6	4.7	165.0	5.0
<b>DISEASES OF DIGESTIVE ORGANS</b>	214.5	8.2	342.3	9.7	308.9	9.4
<b>GENITOURINARY DISEASES</b>	48.8	1.9	55.4	1.6	53.1	1.6
<b>DISEASES OF SKIN, BONES AND LOCOMOTOR ORGANS</b>	468.0	18.0	657.2	18.5	605.7	18.5
<b>OLD AGE AND INEXACTLY DESCRIBED SYMPTOMS</b>	9.7	0.4	51.0	1.4	41.0	1.2
<b>TOTALS</b>	2603.2	100.0	3541.9	100.0	3281.9	100.0

With regard to morbidity among pensioners, circulatory diseases are in first place--1581.2/1000 pensioners, and they constitute 48.2% in the structure

of chronic diseases (Table 2). The incidence of circulatory diseases is lower among employed pensioners than unemployed.

In both employed and unemployed pensioners, the main place in structure of circulatory diseases is referable to atherosclerosis of vessels of the brain, heart and arteries of the legs (67.5 and 77.5%, respectively); essential hypertension is in 2d place (19.6 and 13.8%), diseases of leg veins are in 3d (8.4 and 5.0%). The share of chronic rheumatic heart disease is insignificant in pensioners, only 0.6% of all circulatory diseases.

Diseases of bones and locomotion organs are in 2d place, the main share being referable to osteochondrosis, arthrosis deformans, rheumatoid and metabolic polyarthritis. Nervous system and sense organ diseases are in 3d place among working pensioners, whereas among the unemployed digestive diseases hold this place. It must be noted that most of the "mental disorders and neuroses" class is referable to various forms of neurotic disorders (100% among employed and 61.8% among unemployed pensioners).

Expert clinical examination of pensioners with consideration of the nature and conditions of their work and, for those who stopped working, consideration of their former main occupation made it possible to determine that 25.8% were fit for work, 33.2% had limited fitness and 41% were unfit for work under the usual industrial conditions.

Table 3. Structure of main disabling pathology among pensioners in rural areas (% of total)

CLASS OF DISEASE	EMPLOYED		UNEMPLOYED		TOTAL		
	LIMITED FITNESS FOR WORK	UNFIT FOR WORK	LIMITED FITNESS	UNFIT			
TUBERCULOSIS	1.5	6.5	3.0	0.4	1.0	0.7	1.1
NEOPLASMS	—	—	—	0.4	0.6	0.5	0.5
ENDOCRINE AND METABOLIC DISEASES	4.4	3.2	4.0	1.8	0.6	1.1	1.5
BLOOD DISEASES	—	—	—	0.4	—	0.2	0.2
MENTAL DISORDERS	—	—	—	0.9	0.6	0.7	0.6
DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS	7.4	3.2	5.1	3.5	1.0	2.0	2.5
CIRCULATORY DISEASES	67.6	74.2	69.8	79.9	90.0	86.1	84.9
RESPIRATORY DISEASES	10.3	9.7	10.1	5.2	2.4	3.6	3.4
DIGESTIVE ORGAN DISEASES	2.9	—	2.0	2.2	1.0	1.4	1.5
GENITOURINARY DISEASES	1.5	3.2	2.0	0.4	1.0	0.7	0.9
DISEASES OF BONES AND LOCOMOTOR ORGANS	4.4	3.2	4.0	4.9	1.8	3.0	3.2

The principal cause of diminished work capacity of pensioners is referable to diseases of circulatory organs, the share of which in the structure of the main disabling pathology constitutes 84.9%, i.e., considerably more than in the structure of all chronic pathology among pensioners (Tables 2 and 3). The share of diseases of circulatory organs in the structure of the main disabling pathology is smaller in employed pensioners than unemployed, constituting 69.8 and 86.1%, respectively. In second place are respiratory diseases, while third place is referable to nervous system and sense organ diseases for employed pensioners, diseases of bones and locomotion organs for the unemployed. We were impressed by the absence of neoplasms, blood diseases and mental disorders among the main disabling pathology in employed pensioners.

A comparative study of chronic pathology as a whole and the main pathology causing decline of work capacity of pensioners enabled us to determine the disability levels referable to different forms of diseases. The highest incidence of disability in individuals of retirement age was noted in the presence of tuberculosis (57.1%), mental disorders (50%), diseases of circulatory and respiratory organs (40.1 and 32.2%, respectively). The disability level was low in the presence of diseases of digestive organs (4%), bones and locomotion organs (4.1%), endocrine and metabolic diseases (7.6%). Disability referable to other categories of diseases was in the range of 8.1-16.7%.

Disability level referable to the same classes of diseases was lower among employed pensioners than the unemployed. Thus, disability due to diseases of circulatory organs constituted 32.3 and 42.8% for employed and unemployed pensioners, respectively, and that due to respiratory diseases constituted 23 and 34.7%. This shows that, in general, employed pensioners have milder forms of diseases than unemployed ones. This is also indicated by data on the work capacity [fitness] of employed and unemployed pensioners (Table 4). Among those who continued to work, more than half (51.2%) remained fit, whereas this applied to only 18.2% of those who had stopped working. Most of them were individuals who were unfit for work under ordinary industrial conditions (48.4%).

Table 4. Work fitness of pensioners living in rural areas

SEX	AGE YEARS	EMPLOYED PENSIONERS						UNEMPLOYED PENSIONERS									
		FIT		WITH LIM- ITED FIT- NESS		UNFIT		TOTAL		FIT		WITH LIM- ITED FIT- NESS		UNFIT		TOTAL	
		ABS	%	ABS	%	ABS	%	ABS	%	ABS	%	ABS	%	ABS	%	ABS	%
FEMALE	50-	58	56.9	31	33.3	10	9.8	102	100.0	59	29.6	80	40.2	60	30.2	199	100.0
	59																
	60-	25	49.1	16	32.1	11	18.8	53	100.0	51	12.4	119	29.1	240	58.5	410	100.0
MALE	60-	22	44.0	18	36.0	10	20.0	50	100.0	15	19.5	30	38.9	32	41.6	77	100.0
	69	105	51.7	68	33.2	31	15.1	205	100.0	125	18.2	229	33.4	332	48.4	686	100.0
BOTH																	

The results of this study also revealed that not all pensioners who continued to work were wisely employed: 33.2% required restrictions in the form of a smaller physical load or volume of work, or else a transfer to lighter work with lower qualifications; 15.1% of the employed pensioners required special conditions at the plant or in the home to continue working. Of the unemployed pensioners, 18.2% could continue to work in their former occupation without restrictions and 33.4% with restrictions or in another occupation. Of the unemployed pensioners deemed unfit for work, 21.9% could continue to work under specially provided conditions (mainly in the home).

These data enable us to assess, in the first place, the actual manpower reserve among unemployed pensioners and, in the second place, the work potential of individuals on a pension because of their age who live in rural areas, with consideration of fitness of both employed and unemployed pensioners. Thus, the labor reserve among unemployed pensioners constitutes 66.4%, and it increases to 75.8% if we include employment under specially provided and home conditions for unfit pensioners. The labor potential of pensioners as a whole constitutes

59%; these are pensioners who are able to work under ordinary industrial conditions. It can be increased by another 18.1% by organizing specially provided conditions and work in the home for some of the pensioners who are unfit for work under the usual industrial conditions.

The data obtained as a result of this study indicate that, in spite of the high incidence of chronic diseases among individuals of retirement age, on the whole they have a residual fitness for work, which enables us to make use of a rather significant part of pensioners in socially useful work in rural areas. The results of the comprehensive expert clinical examination could be used to assess the labor reserve referable to individuals of retirement age living in rural areas of a given administrative territory, as well as to plan and organize special industrial and home forms of employment.

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COMPARATIVE EVALUATION OF SPECIFIC METHODS FOR DIAGNOSING Q FEVER

Moscow SOVETSKAYA MEDITSINA in Russian No 7, Jul 82 (manuscript received 18 Oct 80)  
pp 110-112

[Article by P. I. Kambaratov, Yu. A. Il'inskiy, N. I. Amosenkova, N. K. Tokarevich, L. A. Kambaratova and Z. A. Batsina, Department of Infectious Diseases (headed by P. I. Kambaratov, doctor of medical sciences), Yaroslavl Medical Institute, and Department of Infectious Diseases (headed by Prof Yu. A. Il'inskiy), Second Moscow Medical Institute imeni N. I. Pirogov]

[Text] Q fever differs appreciably from other acute infectious diseases in clinical and epidemiological respects, and it can be identified prior to laboratory confirmation. At the same time, it is very important to use specific diagnostic methods. There are works in the literature citing data on the comparative diagnostic significance of the complement fixation test (CFT), agglutination test (AT), indirect immunofluorescence test (IIFT) and ring precipitation test (RPT); however, the RPT was assessed on the basis of a small amount of material (N. K. Tokarevich et al.).

We compared here the diagnostic value of CFT, IIFT, RPT and skin test (ST) [for determining allergy]. We performed the CFT by the conventional method with two doses of complement under refrigeration in a volume of 1.25 ml with antigens of Rickettsia [Coxiella] burnetii phase I (prepared from spleen cultures of *C. burnetii*, strain Shorsher, at the Institute of Epidemiology and Microbiology imeni N. F. Gamaleya) and phase II (manufactured by the Tashkent Scientific Research Institute of Vaccines and Sera). We used the Willer-Coons modification (T. A. Vorontsova; N. I. Amosenkova et al.) of the IIFT. The RPT was conducted by the method of N. I. Amosenkova and N. K. Tokarevich. For the ST, we used a lyophilized preparation of soluble *C. burnetii* antigen prepared by the Boivin method from spleen cultures of phase I, strain Shorsher *C. burnetii*. Antigen prepared from the spleen of uninfected mice using an analogous technique (R. I. Kudelina) served as the control preparation.

A considerable incidence of Q fever was found in Orenburg Oblast and Mordovian ASSR as a result of an extensive screening of various population groups in these regions using the CFT (Table 1). In Table 1, we were impressed by the significant incidence of disease among people who come in contact with livestock products (milk, meat, down, wool, leather), and the frequency of positive results was related to frequency of testing: 26.8% when febrile subjects were tested 2-3 times and only 5.7% when tested once. Consequently, a single test

on febrile patients does not provide a true idea about the extent of distribution of Q fever. It was established that a positive CFT was present in only 14.8% of the cases out of 412 patients and those who had a history of Q fever, on the 6th-7th day of illness (Table 2). In addition to increase in number of positive tests in the 2d, 3d, 4th week and after 1-4 months (61.7, 87.2, 92.8 and 97.9%, respectively), there was also increase in antibody titers. At terms of 5 months to 11 years, a positive CFT was found in 73.6% of the cases, but the titer dropped appreciably. Consequently, while it is a specific and valuable method, it cannot serve for early detection of Q fever.

Table 1. Results of CFT in different population groups in Orenburg Oblast and Mordovian ASSR

PLACE	NUMBER EXAMINED	GROUP SCREENED					
		FEBRILE PATIENTS	DONORS	BLUE, AND WHITE COLLAR WORKERS			
				DAIRY INDUSTRY	MEAT INDUSTRY	TOXIC CHEMICALS	DOWN, WOOL AND LEATHER PROCESSING
ORENBURG OBLAST	<b>TOTAL WITH POSITIVE RESULTS</b>	1155	757	902	1314	355	298
	<b>ABSOLUTE</b>	81	37	47	227	38	60
	<b>%</b>	7,0	4,9	5,2	17,3	10,7	20,1
MORDOVIAN ASSR	<b>TOTAL WITH POSITIVE RESULTS</b>	1790	102	—	176	187	—
	<b>ABSOLUTE</b>	195	2	—	44	58	—
	<b>%</b>	10,9	1,9	—	25,0	31,0	—
ORENBURG OBLAST AND MORDOVIAN ASSR	<b>TOTAL WITH POSITIVE RESULTS</b>	2945	859	902	1490	542	298
	<b>ABSOLUTE</b>	276	39	47	271	96	60
	<b>%</b>	9,4	4,5	5,2	18,2	17,7	20,1

It has been determined that the time of treatment with antibiotics that are effective in cases of Q fever affects the dynamics of titers of complement-fixing antibodies. We demonstrated a pattern: the sooner antibiotic therapy was started, the higher the percentage of CFT with low titers.

We tested 190 serum samples from 136 patients and individuals who had had Q fever with phase II and I antigens simultaneously (see Table 2). Antibodies

to phase I antigen appear no sooner than the 26th day of illness and persist for up to 3 years. Thus, use of phase I antigen enables us to differentiate between a fresh and prior case.

Table 2. Results of CFT with antigens from *C. burnetii* phases I and II in fresh cases of Q fever and subjects with history of this fever

TIME OF TEST FROM START OF ILLNESS	RESULTS OF CFT WITH BURNET RICKETTSIA ANTIGENS									
	PHASE II					PHASE I				
	CFT+			TITER		CFT+			TITER	
	TOTAL SERAS	ABS	%	1:0 1:1	1:0 1:1	1:160 1:2560	TOTAL SERAS	TOTAL	1:0 1:1	1:0 1:1
6-7 DAYS	61	9	14.8	9	—	—	—	—	—	—
8-14 »	302	186	61.7	77	84	25	24	—	—	—
15-21 »	281	245	87.2	70	109	66	37	—	—	—
22-30 »	194	180	92.8	59	66	65	25	3	3	—
1-4 MONTHS	96	94	97.9	32	30	32	28	9	9	—
5-12 »	26	22	—	7	12	3	21	15	13	2
1-3 YEARS	17	15	—	12	3	—	17	12	11	1
4-11 YEARS	63	41	—	34	7	—	38	—	—	—
<b>TOTALS . . .</b>	<b>1040</b>	<b>792</b>	<b>—</b>	<b>300</b>	<b>311</b>	<b>191</b>	<b>190</b>	<b>39</b>	<b>.36</b>	<b>3</b>

IIFT was positive in 42 out of the 60 surveyed patients and those who had had Q fever, at terms ranging from the 9th day to 11 years after onset of the fever. RPT was conducted concurrently with the CFT in 126 cases (Table 3). Table 3 shows that all 6 people who had had Q fever presented a positive RPT, whereas the CFT persisted in a titer of 1:10 in only 2 of them. Of the 63 febrile patients submitted to clinical and epidemiological examination, with consideration of CFT results, at the infectious hospital, Q fever was diagnosed in 17. In all 17 cases, the RPT was positive, and in 7 of them it was positive starting on the 4th-8th day of illness, which was considerably sooner than the CFT finding. Of the remaining 46 patients with fever, 19 had a positive RPT with negative CFT. A thorough analysis of the group revealed the epidemiological situation, in which there was a possibility of contracting Q fever. Apparently, in these 19 cases, the RPT was a reaction indicative of the correct diagnosis. Out of 57 rural residents in a site of Q fever, 26 presented febrile diseases 2 weeks to 5 months prior to the screening, and they proceeded under the diagnosis of "influenza," "sore throat," "pneumonia," and others; 5 were from family sites of Q fever and the other 26 were in the livestock industry. A positive RPT was found in 45 (79%) out of 57 sick cases, whereas a positive CFT was demonstrated in only 26 (45.6%), i.e., considering the history, we can determine that the RPT picked up more cases with history of Q fever than the CFT.

The ST was performed on 79 sick cases and 49 with history of Q fever. It became positive after the 5th day of illness in the presence of negative CFT (70.9%), while the CFT became positive only after the 8th day (53.2%). Both

reactions coincided in 49.4% of the patients. In those who had a history of fever, positive ST and CFT coincided at terms of 1 month to 10 years (83.5%). In order to determine the specificity of the ST, we tested 270 patients with various diseases (25 nosological entities) and 54 healthy subjects. The ST was positive in 17% of the cases of other diseases (CFT in 4.8%) and 13% of the healthy subjects (CFT in 3.7%). The significant percentage of positive ST in the control could apparently be attributed to the great sensitivity and high specificity of the test. Concurrent skin tests with control antigen were negative in all those tested.

Table 3. Results of RPT and CFT in different population groups

GROUP SCREENED	NUMBER TESTED	TEST RESULTS				
		RPT+	CFT+	RPT+ CFT+	RPT+ CFT-	RPT- CFT-
EXPERIENCED Q FEVER FEBRILE PATIENTS	6 63	6 36	2 17	2 17	4 19	— 27
HEALTHY PEOPLE (FROM SITE OF Q FEVER OUTBREAK)	57	45	26	26	19	12
TOTALS	126 100	87 69,0	45 35,7	45 35,7	42 33,3	39 31,0

Thus, there are different methods for detecting Q fever that differ in their diagnostic value. The IIFT is technically difficult and has no advantages over the CFT, RPT or ST, and for this reason it is not expedient to use it for practical purposes. As for the RPT and ST, they are more sensitive than CFT, and for this reason they become positive at an earlier time, while the simplicity of the method allows their use under ambulatory conditions. Consequently, the combination of the three methods mentioned (CFT, RPT, ST), which are mutually supplementary, is necessary for both epidemiological screening of the public and for early detection of Q fever in testing febrile patients who are in a specific epidemiological situation.

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## ADVANCES IN MOLDAVIAN PUBLIC HEALTH

Moscow SOVETSKOYE ZDRAVOOKHRANENIYE in Russian No 10, Oct 82 (manuscript received 1 Jul 82) pp 6-10

[Article by K. A. Draganyuk, minister of health, Moldavian SSR]

[Text] History does not know of another state that has done as much as the USSR within the shortest time for comprehensive development of nations and nationalities.

Moldavia, which was a region of poverty and lawlessness in the past, has been transformed in the years of Soviet power into a flourishing republic with a well-developed industry, multisectorial agriculture, high level of education and culture. This republic produces high-power generators, computers and foundry equipment, electric engines, tractors and other products in high demand in our country and in over 60 countries of the world. It has become a region of intensive agriculture, which produces grapes, fruit, vegetables, grain, industrial crops and livestock products.

The spiritual rebirth of the Moldavian people is an outstanding achievement. At the present time, every third inhabitant of this republic goes to school. In a region where only 1 out of 10 could sign their name before the revolution, more than 1.6 million people are covered with all forms of education. Personnel referable to more than 200 special fields are trained in VUZ's and secondary specialized educational establishments. At the present time, the detachment of scientific workers in the republic is 49 times greater than in 1940.

The republic's health care developed and strengthened in inseparable relationship to economic and cultural construction. Suffice it to mention that the bed resources of therapeutic and preventive institutions grew by over 8 times, as compared to 1940, the year when Moldavian SSR was formed. At the present time, there are about 49,000 hospital beds and availability constitutes 122 beds per 10,000 population.

The material and technical base of health care is being constantly strengthened under the guidance and with the constant help of party and soviet agencies in this republic. New, large, modern general hospitals, polyclinics, dispensaries, sanitary and epidemiological stations, other medical institutions and pharmacies have been created.

Under the 10th Five-Year Plan, there was more government capital investment for the construction of health care projects than in the years of the 8th and 9th five-year plans together. In the last 6 years, hospitals with 5000 beds and outpatient-polyclinic institutions with a capacity of 15,000 visits per shift have been started up. The new therapeutic and preventive institutions include the following: Republic Clinical Hospital with 1000 beds, neuropsychiatric hospital in Beltsy, hospital for disabled veterans of the Great Patriotic War, Republic Sanitary and Epidemiological Station, several large polyclinics in Kishinev, Bendery, Kagul, Grigoriopolskiy, Komratskiy, Lazovskiy, Nisporenskiy and Chadyr-Lungskiy Rayons.

At the present time, the Republic Center for Mother and Child Health Care with 1000 beds is under construction, and its first section is already operational; several other health care projects are also under construction.

The design institutes of Moscow, Kiev, etc., are offering much help in the design of modern hospitals and polyclinics in our republic. More than 100 plants in the nation deliver equipment, apparatus, instruments and many other items to outfit therapeutic and preventive institutions.

In the years of the 10th Five-Year Plan, the funds spent to provide new and existing medical institutions with apparatus and equipment were twice the amounts spent under the 9th Five-Year Plan.

The tasks dealing with bringing the standard of living of the rural population closer to that of the urban population, set forth by the May (1982) Plenum of the CPSU Central Committee, determine the steps to be taken to further improve medical care for the rural population. In 6 years, quite a lot has been done to strengthen the material base of rural health care institutions. With the joint [cooperative] funds of kolkhozes and sovkhozes, about 2000 additional hospital beds and outpatient-polyclinic institutions handling 5000 visits per shift have been put in operation.

The initiative of the workers of Nisporenskiy Rayon in developing and expanding the network of hospitals, polyclinics, medical walk-in facilities merits attention. In the period just ended, 18 health care projects have been built in this rayon. Many other rayons in this republic are following the example of Nisporenskiy. Construction of medical walk-in offices and feldsher-midwife centers is proceeding according to the plans worked out by the First Chair of Social Hygiene and Organization of Health Care at the Kishinev Medical Institute, together with the Moldgiprograzhdansel'stroy Planning Institute.

One of the main indicators of the quality, level and availability of medical care is the number of medical personnel. As compared to 1940, the number of physicians has increased by 12 times and that of paramedical personnel by 16 times. At the present time, there are more than 13,000 physicians and 39,000 paramedical workers employed in this republic, or 32 specialists of the highest level and 98 of the intermediate level for every 10,000 population.

The Kishinev Medical Institute, which was founded in October 1945, plays an important part in training physicians for our republic. At the present time, there are more than 5000 students representing many nationalities of our country studying on the five faculties of this institute. Medical schools of Moldavia are training well paramedical and pharmaceutical personnel.

Public health agencies devote special attention to disposition of personnel, and first of all to manning rural health care institutions. More than 80% of the graduates of the medical institutes are assigned annually to work in a rural area.

The problem of advanced training of physicians and paramedical personnel is being solved in the republic on a broad scale. Last year alone, more than 2000 physicians have increased their qualifications on the faculty of specialization and advanced training of the Kishinev Medical Institute, at institutes for advanced training of physicians in fraternal Union republics, in Moscow, Leningrad, Kiev, Kharkov, Zaporozhye and Kazan. Every fourth physician in this republic has a qualification rating [category]. Annually, more than 3000 paramedical and pharmaceutical personnel undergo advanced training.

In accordance with the decree of the CPSU Central Committee and USSR Council of Ministers, "On Measures for Further Improvement of Public Health Care," considerable work has been done in this republic to develop and strengthen the main elements of public health care--district service, emergency medical care, system of woman and child health care, specialized forms of medical care.

Territorial medical [internist] and pediatric districts are being broken down into smaller ones according to plan. In the last 5 years, the number of medical districts in cities increased from 409 to 587 and the number of pediatric ones from 361 to 498. The average number of residents per occupied position of district internist has been reduced to 2014 and per pediatrician to 743. At the present time, the population receives outpatient-polyclinic care in 46 specialties, with 27 specialties covered in polyclinics of central rayon hospitals. In 1981, the number of visits to physicians increased to an average of 13.6 per urban resident and 5.3 per rural resident.

Reorganization of some rural district hospitals and feldsher-obstetrical centers into medical walk-in facilities is continuing, and there are now 103 of the latter.

The performance of outpatient-polyclinic institutions is being improved. A system of monthly analysis of physician's case load per city and rayon and each specialty has been adopted at the [Moldavian] Republic Information and Computer Center to monitor optimum use of physicians' work time.

There has been further development of the emergency medicine service. This type of care is rendered in this republic by a specialized hospital in Kishinev, 3 stations in Bendery, Beltsy, Tiraspol, 67 departments of central rayon and rayon hospitals and departments of air medical service. In 1981, there were 179 responses per 1000 population. There are 29 specialized brigades employed in the emergency medicine system.

Hospital care has improved significantly; new specialized departments and centers have been created. At the present time, there are 35 types of specialized hospital medical care in this republic, including 18 types in central rayon hospitals.

Changes have taken place in the work of medical institutions that are related to development of specialized forms of care. In a 20 year period (1960-1980),

the number of traumatological beds increased by 12 times, urological by 10 times, neurological by 5 times, etc. Self-contained specialized institutions have emerged, and there has been a sharp increase in their equipment. This made it possible to open 11 republic-level specialized centers in recent years.

Special attention is being given to organization of the cardiological service, which was actually founded in recent years. At the present time there are 1740 cardiological beds at therapeutic and preventive institutions. Cardiological departments have been opened in the republic-level, urban and a number of rayon hospitals. A total of 42 cardiological offices were organized and are operational at polyclinics and there are 12 cardiological emergency medical care brigades.

Quite a lot has been done in the area of mother and child care. The material and technical base has been expanded for pediatric and obstetric institutions; maternity homes, children's departments in hospitals and polyclinics have been put in operation. There has been a 1.4-fold increase in size of maternity departments of central rayon hospitals, and the size of pediatric departments in these hospitals has reached an average of 67 beds. Pediatric beds have been concentrated at central rayon hospitals and large rural hospitals. There has been broader development of specialized forms of medical care for children and mothers. Organization of child nutrition has improved. All this has been instrumental in increasing the volume and improving the quality of pediatric care, improving the health status of children and reducing child and mother mortality.

The preventive basis of Soviet health care has determined implementation of strictly specific health-improving and epidemic-control measures, which provide the necessary conditions to safeguard and strengthen the health of the people.

Dispensary care of the public is continuing to be upgraded. Coverage by dispensary supervision of sick adults and adolescents constituted 214.5/1000 people referable to the same groups in 1981.

The scientists of Kishinev Medical Institute, as well as the republic's scientific research institutes, have made an appreciable contribution to scientific research.

The efforts of scientists and practicing physicians are concentrated on detection of early forms of cardiovascular diseases, cancer, pathology of respiratory organs, development of diagnostic and therapeutic methods for children's surgical diseases, new organizational forms of medical care for the rural population in order to bring the standards of care closer to those of the urban population.

The public is better supplied with drugs. The number of pharmacies has been brought up to 406 and the work load per pharmacy up to 9900 people.

In the last 6 years, the growth rate for beds, physicians, paramedical personnel, visits to outpatient offices and polyclinics, as well as drugs, was higher in Moldavian SSR than the average for the nation. This was a period of organization of republic centers and specialized services: cardiological, pulmonological, gastroenterological, endoscopic, resuscitation and others. As a result of improved outfitting of medical institutions with medical equipment, a new step was taken in the area of diagnosing and treating a number of diseases; in particular, modern methods of radioisotope and functional diagnostics, clinico-biochemical,

bacteriological, cytological, immunological and other types of tests are used. This made it possible to increase the volume and improve the quality of medical care, which was instrumental in improving the health status of the public.

Of course, quite a lot has been done. But many problems have not yet been solved. The number of beds in the republic is growing annually. However, some of them, particularly in rural areas, do not meet modern requirements. The level of medical care of rural workers is still lower than the urban level. Many district hospitals and some rayon hospitals are situated in poorly outfitted premises, and they are inadequately furnished with equipment and apparatus.

The food program, which was developed in accordance with the historical decisions of the 26th Congress of our party, provides for a wide range of measures for social transformation of rural areas and improvement of medical care for the public. The decree of the CPSU Central Committee and USSR Council of Ministers, "Measures for Further Improvement of Housing, Communal, Social-Cultural Living Conditions for the Rural Population," which was adopted by the May (1982) Plenum of the CPSU Central Committee, provides for the construction of rural medical walk-in offices, which will bring medical care closer to the rural population.

There is still much to be done for advanced training of health care workers, to improve the quality and sophistication of medical care of the public, improve prevention of diseases and campaign for a healthy life-style. There are important tasks dealing with improvement of performance of outpatient-polyclinic institutions, emergency medical care, increased personal responsibility of every physician for performing his professional duties and obligations.

The medical workers of this republic will do all that is necessary to provide prompt and qualified medical care for the people.

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## MEANS OF IMPROVING DISPENSARY CARE OF THE PUBLIC

Moscow SOVETSKOYE ZDRAVOOKHRANENIYE in Russian No 10, Oct 82 (manuscript received 25 Jan 82) pp 15-19

[Article by M. Kh. Kamalov, minister of health, Bashkir ASSR, O. L. Vekhnovskiy, chief physician of Ufa Municipal Hospital No 8, M. Ye. Petrov, doctor of medical sciences, chief physician at the Bashkir Republic Clinical Hospital imeni G. G. Kuvatov, M. I. Saitov, chief physician of Tatyshlinskiy Rayon, and V. V. Sayfutdinov, deputy chief physician at Republic Clinical Hospital]

[Text] Purposeful work is being done in Bashkir ASSR to upgrade dispensary care, to gradually change from dispensary coverage of specific groups to dispensary care of large industrial collectives of industrial and construction workers, as well as those employed in the main professions in agricultural production and the rural population.

In the years of the 10th Five-Year Plan, the number of people under dispensary supervision reached 589/1000 population, with 447.3 in good health and 141.7 sick. The number of patients under dispensary observation increased in these years from 387,900 to 538,200, or by 28%. In order to standardize evaluations of quality and efficacy of dispensary care, the state of dispensary work in this republic is determined on the basis of such objective indicators as coverage by dispensary care (ratio of number of people under dispensary supervision to number of sick cases picked up), promptness of placing people under dispensary supervision (ratio of number of primary cases that were picked up and placed on the rolls per month to total number of patients under supervision), promptness and accuracy of diagnosis and treatment (ratio of number of patients on whom the minimum diagnostic examination was made, who were provided with specialist consultations and underwent planned therapeutic and health-improving measures, to total number of patients under dispensary supervision), degree of planning of observation (ratio of actual dispensary observations to planned number). The fitness for work of individuals under dispensary supervision is analyzed according to number of cases of exacerbation of the chief disease and days of disability [absence from work] per 100 employed dispensary patients and the health index is determined according to number of all dispensary patients who had no exacerbations during a follow-up year (%).

There are dispensary care offices at the therapeutic and preventive institutions of this republic, which monitor the quality of dispensary supervision, expansion of the groups subject to dispensary care and relieve physicians from types of

work that are not inherent in them. Dispensary care with distribution of a contingent into five groups makes it possible to accumulate data banks for those under dispensary supervision by virtue of transfer (rather than removal from the rolls) of the treated individuals into the group of follow-up observation. The structure of dispensary groups, examined dynamically, characterizes the efficacy of dispensary care.

Table 1. Frequency and rank of classes of diseases picked up during physicals

CLASS OF DISEASES	MORBIDITY PER 1000 POPULATION	RANK (PLACE)
1. INFECTIOUS AND PARASITIC DISEASES	18,4	11
2. NEOPLASMS	16,1	12
3. DISEASES OF ENDOCRINE SYSTEM NUTRITIONAL AND METABOLIC DISORDERS	25,2	9
4. DISEASES OF BLOOD AND HEMOPOIETIC ORGANS	12,1	13
5. MENTAL DISORDERS	23,2	10
6. DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS	195,8	3
7. DISEASES OF CIRCULATORY SYSTEM	208,9	2
8. DISEASES OF RESPIRATORY ORGANS	70,5	5
9. DISEASES OF DIGESTIVE ORGANS	466,8	1
10. DISEASES OF GENITOURINARY ORGANS	77,2	4
11. DERMATOLOGICAL DISEASES	55,3	6
13. DISEASES OF SKELETONMUSCULAR SYSTEM	32,7	8
16. SYMPTOMS AND INACCURATELY DESCRIBED STATES	42,1	7

This republic's ministry of health has published methodological recommendations to render practical assistance to physicians administering dispensary care. In 1980, there was a republic-level scientific and practical conference on dispensary services to the public, at which papers were delivered by professors from the medical institute, chief specialists of the Bashkir Ministry of Health and practicing physicians. The published proceedings of this conference served as a good manual for physicians in all specialties involved in dispensary care.

The organizational and methodological work done in this republic to upgrade dispensary care and improve its efficacy prompted much interest on the part of the medical community, while one of the progressive medical institutions, the medical section at the Novoufimskiy Oil-Refining Plant (Municipal Hospital No 8) decided to provide complete dispensary coverage for the inhabitants of the subordinated Tatyshlinskiy Rayon by improving the effectiveness of supervisorial work. Since 1979, following a prepared program, teams of physicians consisting of internists, surgeons, pediatricians, obstetrician-gynecologists, ophthalmologists, otorhinolaryngologists, neuropathologists and stomatologists (and proctologists when indicated) have been screening the public. Fluorography was performed by the mobile brigade of the Republic Tuberculosis Dispensary. Representatives of the laboratory and sanitary-epidemiological service participated in this work.

The CPSU RK [rayon committee or republic committee], ispolkom of the rayon soviet of people's deputies, administrators of party and farm trade-union organizations, as well as the sanitary [health] aktiv of the rayon, provided active assistance. Each team worked for a month, after which it was replaced with another. Dispensary enrollment proceeded in the periods between heavy farm work.

Tatyshlinskiy Rayon is located in the northern part of the republic. It has a population of 29,664, with 13,284 males and 16,380 females. There are 98 inhabited localities in the rayon, with 200 to 1700 inhabitants in each. Medical services are rendered by one central rayon hospital (205 beds), 2 rural district hospitals (70 beds), 1 rural medical walk-in facility, 31 feldsher-obstetric centers, 1 sanitary and epidemiological stations and 3 pharmacies.

In the period from 1979 to 1981 a total of 21,573 people were screened. As of 1 August 1981 there were 12,043 (68.0%) patients under dispensary supervision. The incidence and rank of categories of diseases picked up at the physicals are listed in Table 1.

In the course of work dealing with disease prevention there was considerable increase in coverage of the public by preventive special screenings (Table 2).

Typically, coverage by dispensary supervision and the structure of the contingent under such care changed quantitatively and qualitatively. While the number of people subject to periodic physicals remained at virtually the former level (agricultural workers, food handlers, pregnant women, adolescents, etc.), the group under dispensary care increased significantly in number, since it included newly detected sick cases and individuals without exacerbation of diseases, which makes it possible to work with them to prevent exacerbations, as with a contingent of essentially healthy people.

Concurrently with the complex screening of the public, therapeutic and health-improving measures were implemented at rayon and republic-level therapeutic and preventive institutions, as well as departments of the head hospital (Table 3).

The data in Table 3 indicate that a total of 5033 people were covered by the main forms of therapeutic and preventive measures in the above period. Stomatologists accomplished much work, having provided oral hygiene for 10,839 people and prostheses for 1089.

Thus, the supervisorial [chief] assistance on the part of urban therapeutic and preventive institutions could be one of the means of gradually changing to dispensary supervision of the entire rural population. This complex work had been done without assignment of additional positions and was instrumental in raising the standards of medical care for the rural population closer to those for the urban population.

In the course of the experiment, it was possible to determine the actual morbidity among the inhabitants of this rayon, need for medical care and extent to which it is met in different type (rayon, city, republic) therapeutic institutions.

Table 2. Coverage of public by special preventive (per 1000 population) and periodic examinations

EXAMINATION	TATYSH- LINSKIY RAYON		BASHKIR ASSR (RURAL)	
	1975	1980	1975	1980
PREVENTIVE SCREENING FOR				
TUBERCULOSIS	523,4	591,7	556,4	587,0
MALIGNANT NEOPLASM	262,2	363,5	262,4	329,4
SYPHILIS	90,2	221,3	93,3	192,4
GONORRHEA	24,0	284,3	57,5	107,5
FUNGAL DISEASES	509,8	929,5	668,4	718,9
GLAUCOMA	57,7	282,1	94,2	118,5
GOITER	509,8	929,5	592,6	664,1
PERIODIC	88,2	97,2	85,4	86,1

Table 3. Coverage (%) of dispensary patients with therapeutic and health-improving measures in 1979-1980

CATEGORY OF DISEASE	TREATMENT GIVEN					PATIENTS			
	AS OUTPATIENT	IN HOSPITAL	INCLUDING			OPERATED IN HOSPITALS	UNDERWENT SANATORIUM-RESORT CARE RESTED IN PREVENTORIUM AND REST HOMES	RECEIVED GOOD VOCATIONAL GUIDANCE	ADDITIONALLY RECEIVED DENTAL HYGIENE AND PROSTHESES
			IN CENTRAL RAYON	IN CENTRAL DISTRICT	IN CHIEF HOSPITALS				
INTERNAL MEDICINE	52,1	47,7	24,9	8,0	14,8	—	40,6	24,7	—
SURGERY	44,9	55,0	23,1	13,3	18,6	44,9	19,7	9,1	—
GYNECOLOGY	51,3	48,4	31,4	10,2	6,8	22,5	1,9	8,5	—
PEDIATRICS	54,0	45,9	11,1	2,6	32,2	—	10,6	—	—
DERMATOVENEREOLOGY	39,7	60,7	46,4	—	14,3	—	1,4	0,8	—
ENDOCRINOLOGY	24,0	12,0	2,0	5,0	5,0	—	5,0	8 (ABS. FIGURE)	—
UROLOGY	64,4	35,6	9,2	25,4	1,0	4,2	2,1	2,1	—
OPHTHALMOLOGY	55,7	44,3	7,0	—	37,3	37,3	—	15,8	—
OTORHINOLARYNGOLOGY	17,1	82,7	81,5	—	1,2	50,2	1,0	—	—
NEPHROLOGY	31,0	42,0	28,0	—	14,0	—	21,0	10 (ABS. FIGURE)	—
PROCTOLOGY	26,0	38,0	8,0	30,0	—	29,0	8,0	5 "	—
PHTHISIOLOGY	53,7	46,3	44,1	—	2,2	1,4	5,0	5,8	—
ONCOLOGY	22,0	41,0	14,0	—	27,0	14,0	—	10 (ABS. FIGURE)	—
NEUROPSYCHIATRY	41,0	59,0	22,5	—	36,5	—	10,0	3,6	—
<b>TOTALS</b>	47,1	52,8	31,3	7,4	14,1	11,5	12,4	10,5	—
<b>ADDITIONALLY, STOMATOLOGY</b>								839	
								1089	

The joint efforts of head and sub-head institutions resulted in a drastic improvement of sophistication and quality of medical services for both the rural and urban population (for its achievements in 1980, the medical section of Novoufimskiy Oil-Refining Plant received the challenge Red Banner).

In 1979, a medical 120-bed building was erected in Tatyshlinskiy Rayon; there was also an increase in size of the departments of internal medicine and surgery (to 54 and 40, respectively); offices were opened for dispensary care, as well as one for premedical [not to a physician] visits, examination room, therapeutic physical culture and massage room, functional diagnostic laboratory linked by the Volna system to the Republic Consultant Cardiological Center at the Republic Clinical Hospital imeni G. G. Kuvatov.

Table 4. Coverage by dispensary supervision of individuals suffering from the most serious diseases in 1980, in Tatyshlinskiy Rayon and rural rayons of Bashkir ASSR ("Main Indicators of Medical Services to Inhabitants of Bashkir ASSR According to Data From Annual Statistical Reports for 1980," Ufa, Bashkir Ministry of Health, 1981, 211 pages).

Disease	Coverage by dispensary supervision, %	
	Tatyshlinskiy Rayon, Bashkir ASSR	mean indicator for rural rayons of Bashkir ASSR
Thyrotoxicosis		73.3
Diabetes mellitus		98.8
Glaucoma		96.8
Rheumatism		95.5
Essential hypertension	} 100	55.4
Acute myocardial infarction		98.5
Angina pectoris		97.0
Ischemic heart disease		47.5
Gastric and duodenal ulcers		94.7
Chronic nephritis		92.7

The work schedule has been changed at the polyclinic of the central rayon hospital and a "coupon" [ticket, stub] system was adopted for all days of the week. There is strict adherence to the plan for visiting work done by central rayon hospital specialists in district hospitals, rural medical offices, feldsher-midwife stations, and discussion of the plan with the chief physician. The rayon newspaper set up a "health page," where 49 articles on medical and health topics were published. There have been 11 conferences and 1032 lectures were delivered. There is now 100% coverage (Table 4) with dispensary supervision of patients suffering from the main diseases affecting the health status of the public, fitness for work. Physicians in all specialties participate in dispensary care.

In the future, there are plans for quarterly trips by the supervisors of specialized departments at the head hospital for consultations with patients, performance of demonstration operations, screening patients for treatment; the hospital administrators will make trips for organizational and methodological work.

In view of the fact that there are 28 physicians at work in Tatyshlinskiy Rayon, with 535 healthy people and 420 patients under dispensary supervision per physician, we altered somewhat, in the direction of decrease, the frequency of periodic observation of dispensary cases in the group with compensated course of illness.

The study of the above practices is being summarized by the Bashkir Ministry of Health and Republic Clinical Hospital imeni G. G. Kuvatov for the purpose of extending them to other large urban therapeutic and preventive institutions.

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HEALTH STATUS OF WOMEN AND SOME ASPECTS OF BIRTHRATE IN URBAN AND RURAL AREAS

Moscow SOVETSKOYE ZDRAVOOKHRANENIYE in Russian No 10, Oct 82 (manuscript received 16 Mar 82) pp 33-37

[Article by M. Ya. Podluzhnaya and L. D. Araslanova, Perm Medical Institute]

[Text] The birthrate plays an extremely important role in population reproduction. It ultimately determines population growth and replenishment of manpower resources. In the last decade, the birthrate has been studied intensively in relation to various socioeconomic and sociohygienic factors. For practical public health care, it is very important to determine its medical aspects, i.e., to study child-bearing as a function of health of couples, which has been repeatedly mentioned in the works of A. F. Serenko, Yu. A. Dobrovolskiy, Yu. P. Lisitsyn, I. P. Katkova and others. However, this aspect of the problem has been insufficiently investigated, although some studies have been pursued in recent years (I. P. Katkova; O. Ye. Chernetskiy and others).

We conducted an in-depth study of birthrate on the example of a cohort of newlyweds up to 30 years of age. We studied child-bearing in the first 7 years of marriage in Perm (2900 couples) and a rural area (450 families). We examined the influence on intensity of child-bearing not only of sociohygienic and psychological factors, but health-status of the couples, primarily the mother, by means of individual observation of couples. We established that there was a distinct trend toward a one- and two-child family in both cities and urban areas. The share of such families constituted an average of 88%. The number of third and subsequent births decreased in the last 5 years by 51% in urban families and 36.9% in rural ones.

Combined evaluation of the influence of various factors on child-bearing enabled us to demonstrate their role and proportion. It was established that socioeconomic factors affect the actual and planned number of children. In Perm, families with less favorable material and housing conditions plan to have 2-3 children considerably less often than those with higher income and good housing (53.4 families versus 67.6 per 100 surveyed,  $P<0.05$ ). We were impressed by the fact that the vast majority of couples in rural areas wished to have not one, but two, three or more children (89.9 families out of 100 versus 60.1 in the city). However, even in the rural area, there is a relationship between this indicator and living conditions. A total of 95.9 out of 100 families with good economic and housing conditions and 87.2 out of 100 with less favorable conditions plan to have 2, 3 or more children.

The health status of women is also rather important. This was indicated by the findings of a retrospective study of morbidity among women up to 30 years of age over a 7-year period in Perm (1966-1972) and a rural area (1969-1975), and data on actual and planned number of children. Analysis of morbidity revealed that it is an average of 28% higher among urban women than rural ones. For example, at the time the marriage was registered, the morbidity indicator for women of Perm constituted 867.1/1000 and in rural areas 645.7; at the time of the survey the figures were 1279.9 and 906.9 cases per 1000 women (see Table). Morbidity indicators were higher for urban women than rural for all the main categories of diseases, with the exception of infectious and parasitic diseases, as well as diseases of the skin and subcutaneous tissue; the incidence thereof was higher in rural areas.

Morbidity according to frequency of seeking medical attention by married women in Perm and rural area (in cases per 1000 people)

DISEASE	PERM		RURAL AREA	
	1966 r.	1972 r.	1969 r.	1975 r.
INFECTIOUS AND PARASITIC DISEASES	41,1	60,2	47,1	65,0
DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS	62,4	84,0	42,6	58,3
DISEASES OF CIRCULATORY SYSTEM	18,0	45,8	13,4	22,4
DISEASES OF RESPIRATORY ORGANS	400,8	545,2	266,8	340,8
DISEASES OF DIGESTIVE ORGANS	53,4	90,6	29,1	49,3
DISEASES OF GENITOURINARY ORGANS	89,3	133,4	92,0	141,2
COMPLICATIONS OF PREGNANCY, PARTURITION AND POSTPARTUM PERIOD	59,6	62,3	28,2	37,3
DISEASES OF SKIN AND SUBCUTANEOUS TISSUE	44,5	42,4	47,1	69,5
DISEASES OF SKELETONMUSCULAR SYSTEM	15,7	59,2	20,1	31,4
ACCIDENTS, POISONING AND TRAUMA	51,5	84,3	49,4	78,5
OTHERS	30,8	72,5	9,9	13,2
<b>TOTALS</b>	<b>867,1</b>	<b>1279,9</b>	<b>645,7</b>	<b>906,9</b>

According to our data, the first two places in the structure of morbidity in urban and rural areas are occupied by respiratory and gynecological diseases. In the city, the following are in third and subsequent places: diseases of digestive organs, accidents, poisoning and trauma, diseases of the nervous system and sense organs; in the rural area: accidents, poisoning and trauma, diseases of the skin and subcutaneous tissue, infectious and parasitic diseases. Examination of morbidity indicators over a 7-year period revealed a rise in both the city and rural area. However, there was more appreciable (by an average of two times) rise in incidence of chronic diseases (diseases of circulatory organs, endocrine and nervous system, mental disorders and neoplasms, gynecological diseases) in the urban area. In the rural area, the rate of increase in incidence of these forms of pathology was slower, but there were more frequent cases of genitourinary diseases; their incidence was higher than in Perm. In 7 years, there was an increase in number of women who had prior or existing diseases potentially related to reproductive function (from 26.8 to 44% in the city and from 20.1 to 33.9% in the urban area).

It was found that female morbidity is determined more by the outcome than frequency of pregnancies, to equal extents in the city and rural area. Thus, the number of pregnancies per 100 surveyed in Perm constituted  $390.7 \pm 11.74$  in

healthy women and  $379.4 \pm 22.05$  in sick ones ( $P < 0.05$ ); the frequency of abortions constituted  $238.5 \pm 10.9$  in healthy women and  $319.2 \pm 20.95$  in sick ones ( $P < 0.05$ ). This indicator constituted  $387.6 \pm 21.04$  per 100 screened among women suffering from cardiovascular and gynecological diseases. The same pattern was observed in the rural area, although there were somewhat fewer abortions than for urban women. As was the case under urban conditions, there was no appreciable difference in frequency of pregnancies in rural healthy and sick women ( $398.4 \pm 12.4$  and  $389.7 \pm 19.4$ , respectively). However, the number of abortions was  $209.8 \pm 10.5/100$  screened for healthy women and  $311.2 \pm 17.6$  for sick ones. Consequently, abortion as a means of family planning was used more actively in both the city and rural area by sick women. We should call attention to the fact that women suffering from some disease or other resort quite often to abortion of their first pregnancy. Thus, the share of abortions referable to the first pregnancy in healthy women constituted 8.4% in the city and 6.3% in the rural area, the figures for sick women being 17.7 and 15.5%, respectively. This could not fail to aggravate the course of chronic extragenital diseases, and it was instrumental in onset of obstetric pathology, premature and still births. It was found that 9.2% of the urban women and 8.9% of the rural ones suffer from sterility.

The health status of women influences the actual and planned number of children. In Perm, healthy women had considerably more children ( $149.7 \pm 29.6/100$  screened) than sick ones ( $88.7 \pm 11.5$ ;  $P < 0.05$ ). This indicator constituted only  $50.1 \pm 4.6$  among women with chronic pathology of reproductive organs. This factor had an even stronger influence on presence of two and three children in the family. Families where the woman is in good health limit themselves to 1 child in 55.6% of the cases, 2 in 40.4%, 3 in 3.2% and 4 in 0.8% of the cases. With respect to sick women, they had 1 child in 92.3% of the cases and 2 in 7.7%; there were no women with three children. Women suffering from chronic diseases planned to have 2 children considerably less often ( $31.4/100$  versus  $59.3/100$ ) and none planned to have 3 children. Healthy women planned to have 3-4 children in 12.9% of the cases.

In rural areas, we also found that the woman's health affected the number of children in the family, although the influence was somewhat less strong than in the city. According to our findings, healthy women in rural regions limited their family to 1 child in only 18.3% of the cases and sick ones in 50.3% of the cases. Healthy women had 2 children each in 54.0% of the cases and sick ones in 31.7%, the figures for 3, 4 or more children were 21.4 and 6.3% of the cases, respectively.

The health of the women had a more appreciable influence in rural family planning in the case of 3, 4 or more children. While sick women planned to have 2 children each almost 1.5 times less often than healthy ones ( $45.1/100$  versus  $61.8$ ), when planning 3, 4 or more children the difference became more substantial ( $4.5$  versus  $15.8$  per 100). Consequently, the health status of women is the deterring factor in deciding on how many children to have. This circumstance must be taken into consideration by both urban and rural physicians. One should single out of the number of women under observation of child-bearing age those which a high risk in order to treat them and prevent the undesirable sequelae of chronic diseases. Analysis of the activity of women's consultation offices in Perm and rural

regions shows that they implement dispensary supervision without a differentiated approach to different categories of women, they do not explain actively enough the harm of abortions and pursue such work without consideration of the concrete demographic situation. We found that 47.7% of the young women in the urban area and 35.2% of those in the rural area were not under regular observation at all. About one-third of these women suffered from somatic diseases and a significant part of them (26-27%) was under dispensary care at polyclinics, but the obstetrician-gynecologists did not take this into consideration.

Thus, the demographic policy in the area of birthrate is related to both socio-economic factors, which are improving constantly in our country, and strengthening the health of young women employed in industry and agriculture.

In addition to solving problems of limiting female labor in a number of industries and districts, improvement of social-living and industrial conditions, it is necessary to upgrade comprehensive medical supervision of urban and rural women of child-bearing age on the basis of a differentiated approach, and to single out the high risk groups. One should organize mandatory dispensary supervision for adolescent girls and young married women, taking into consideration not only the presence of concrete pathology, but living conditions and demographic activity. It is imperative to intensify prevention of somatic diseases, chronic specific pathology, premature births, to control abortions and campaign for large families, and continue to develop specialized medical care. Such activity will be one of the effective forms of participation of physicians in implementing an effective demographic policy. The work of public health agencies and institutions, particularly the obstetric service, should be evaluated not only by indicators of morbidity, mortality and lethality, but birthrate.

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## SOME QUESTIONS OF ECONOMICS IN PUBLIC HEALTH CARE

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(manuscript received 13 May 82) pp 3-7

[Article by G. V. Sergeyev, deputy RSFSR minister of health]

[Text] In the "Food Program of the USSR for the Period up to 1990," which was approved by the May (1982) Plenum of the CPSU Central Committee, it is stressed that "systematic implementation of measures for social development of rural areas, further improvement of welfare, culture, medical and everyday services to rural residents constitutes the most important task for party, soviet, management and trade-union agencies." In this regard, the question of making wise use of material and manpower resources in public health care, which direct themselves to safeguarding the health of the people, particularly those residing in rural areas, acquires enormous importance.

In a socialist society, medical workers engaged in preserving and reproducing manpower resources are instrumental in comprehensive implementation of national economy plans and solving economic problems.

Concurrently with the rapid and coordinated development of all sectors of the national economy, public health care is also developing. With each year, the number of beds and medical personnel are increasing, the material base is strengthening. Scientific and technological progress has made it possible to introduce into health care practice the latest diagnostic and therapeutic methods in the last few years: broad-scale introduction of x-ray units with electron-optical transformers, radioisotope materials, laser technology, thermography ["thermovision"], pressure chambers, artificial kidneys, artificial respiration machines and extracorporeal circulation units. The first steps have been taken toward practical use of electronic computers for diagnostic purposes as well as public health management. Dozens of new, effective drugs are appearing annually. It is necessary to make use skillfully and efficiently of the enormous material resources and manpower existing in the public health system for the purpose of prompt and qualified medical care of the public in accordance with the objectives set forth by the 26th CPSU Congress.

At the present time, the public health care expenses constitute a significant part of the national budget. Public health institutions have enormous fixed capital in the form of hospital and polyclinic buildings, buildings used for

other purposes, expensive medical, laboratory and technological equipment, ambulances and business vehicles, etc.

For example, the fixed capital referable to health care facilities started up in the RSFSR in recent years is as follows: urban 1000-bed hospital in Vladivostok about 9 million rubles; emergency care 990-bed hospital in Volgograd about 15 million rubles; Novosibirsk Scientific Research Institute of Circulatory Pathology about 8 million rubles. The fixed capital for the complex of educational and laboratory buildings of the Second Moscow Medical Institute, construction of which will be completed under the current five-year plan, will amount to 57 million rubles. Large amounts of water, fuel, electric power, petroleum products, building materials and other resources are spent on operation of hospitals, creches, sanatoriums and other health care institutions.

More than 3 million physicians, pharmacists, paramedical and other personnel are employed in the RSFSR public health system. These are enormous manpower resources, their role and importance to the economy are common knowledge.

The network of medical and pharmaceutical institutions is growing and developing constantly, with concurrent increase in outlay of state funds for their upkeep.

According to the decisions of the 26th CPSU Congress and decrees of the November (1981) Plenum of the CPSU Central Committee, rational and efficient (not to the detriment of quality of patient diagnosis and treatment) use of all allocated monies, material and manpower resources is a task for administrators of health care on all levels, medical and pharmaceutical institutions, scientific research and medical institutes.

The main health care expenses are related to upkeep of hospital beds. In 1981, the share of health care expenses in the RSFSR for this purpose constituted 69.1%. The most qualified, mainly specialized, medical care is given in hospitals. Bed resources are growing annually. In 1982, this indicator for RSFSR reached 131.1 beds/10,000 population. In addition, there are administrative territories where the number of beds exceeds the standard. We refer to Arkhangelsk, Astrakhan, Magadan, Novgorod, Pskov, Ivanovo, Kostroma, Yaroslavl, Kirov, Sverdlovsk, Kemerovo, Sakhalin Oblasts, Karelian, North Osetian and Tuva ASSR. In spite of the high availability of beds, there are instances in all regions of refusing to hospitalize routine [scheduled] and, in a number of cases, emergency patients. At the same time, the bed resources are used unwisely and inefficiently in many oblasts, krays and autonomous republics, and this is attributable to failure to devote proper attention to these matters by administrators of the concerned health care agencies. On the whole, for RSFSR in 1980 and 1981, each hospital bed was used for only 325 days per year in urban areas, instead of the 340 days according to the standard, whereas in rural areas the figure was 316 days, versus the standard of 320 days. In 1981, the number of days of hospital bed use diminished in urban areas: the indicators were below the republic averages in Arkhangelsk, Vladimir, Kaluga, Chita and Kamchatka Oblasts, Karelian, Dagestan and Yakutsk ASSR. For several years, there was exceptionally poor use of beds in urban areas of Kurgan, Ivanovo, Ryazan, Voronezh, Kaliningrad and Tomsk Oblasts, Kalmyk, North Osetian and Tatar ASSR.

The indicators of bed occupancy in rural areas ranged from 328 days in Magadan Oblast in 1981 to 257 days in Orel Oblast, which has been in last place in RSFSR for several years according to this indicator.

Beds assigned for patients with endocrine diseases, occupational diseases and blood diseases are vacant more than others, which indicates that there are too many beds for these categories and poor work on the part of the concerned specialists--service administrators. Against the general background of minimal use of pediatric beds, they are used better than others in Murmansk and Belgorod Oblasts, Mordovian, North Osetian, Udmurt and Bashkir ASSR. The expenses for a vacant hospital bed are nonproductive and cause considerable economic loss.

For example, in Voronezh Oblast, each of the 20,720 beds in urban areas was occupied for only 311 days in 1981, i.e., it was unoccupied for 29 days according to the standard; the economic loss in 1981 for this reason constituted 4.7 million rubles.

In recent years, we have been impressed by the unsatisfactory dynamics of bed turnover. If we were to exclude for greater stability of this indicator the beds used for mental patients, we would find that bed turnover decreased on the average in RSFSR from 21 in 1975 to 20.7 in 1981 in urban areas and from 23 to 21.9 in rural regions. In 1981, bed turnover constituted 23.3 in urban areas of Saratov Oblast and only 16.4 in North Osetian ASSR; the fluctuations of this indicator were even greater in rural areas: from 29.3 in Udmurt ASSR to 14.9 in Leningrad Oblast. An increase in this indicator by 1 indicates that a patient to whom hospitalization was not refused was additionally treated in each bed at the hospital. Introduction of modern diagnostic and therapeutic methods in health care practice, as well as new drugs, is instrumental in shortening the time required to determine the diagnosis and for treatment; for this reason, the decline of bed turnover indicator is unjustified, and a low figure most often indicates that there is poor organization of the work of medical personnel, lack of analysis of performance of medical institutions and proper management on the part of the administrators of relevant health care agencies.

At the present time, there are vast reserves for improving patient hospitalization in the Russian Federation and the majority of administrative territories by improving use of bed resources, and the task for health care managers on all levels is to assure the constant and efficient operation of each hospital bed and, consequently, to solve problems of hospitalizing many thousands of patients with no refusals.

Among the indicators characterizing outpatient polyclinic care of the public, the function of a physician's post is one of the most important. Experience has shown that many administrators of medical institutions and health care agencies underestimate the importance of this indicator; for this reason, physicians often have too small a work load, which compels administrators to draw upon additional personnel and equipment to render the necessary medical care to patients. At the same time, there is no implementation of scheduled preventive measures, while some of the work pertaining to house calls is relegated to the emergency medical service. The indicator of function of physician's post [position] fluctuates significantly in different administrative regions of

RSFSR, whereas on the average for RSFSR it is holding on a level that is below the nominal [estimated] mean indicator. This is indicative of inadequate volume of work and great oversights in organizing it, as well as existence of considerable reserves for improving outpatient polyclinic care with the existing number of physicians. Moreover, flaws in organizing outpatient polyclinic care (lines waiting to be seen by physicians, sudden changes in work schedule, restricted appointments and house calls, shorter polyclinic work hours, etc.) create a heavy burden on the emergency service.

It must be noted that a brigade of the emergency medical service cannot fully replace a polyclinic physician. The district physician is familiar with the patients in his district and can make a more correct decision rapidly, taking into consideration the patient's individual distinctions, than could be done by the emergency medical brigade.

It should be noted that one visit by a district physician to a patient costs the government an average of 1.28 rubles, whereas one response by the emergency medical brigade costs 8-10 rubles. The dynamics of indicators of work done by the emergency medical service in recent years does not allow us to draw optimistic conclusions. With the estimated indicator of 2000 responses/10,000 population, the emergency medical service is compelled to service considerably more calls, and this indicator is growing annually, having reached 4000 responses per 10,000 population in 1981 as the average in RSFSR.

It is not difficult to estimate what oversights and miscalculations in organizing outpatient polyclinic care cost the government.

There are also utterly inadmissible instances when seriously ill, sometimes incurable patients are not hospitalized. First of all, this causes some relative of the patient's to be relieved of his job (which causes a certain economic loss to industry). Moreover, if there are 4-5 such patients cared for at home, the 24-h emergency medical brigade becomes overburdened, since it is called upon to service all patients requiring emergency care. When such a patient is hospitalized, the quality of medical care is drastically improved, there is considerable reduction of economic outlay, and release of the emergency brigade to serve its immediate purpose.

In some administrative territories, the emergency medical service is often used as a sort of transportation department to transport patients and medical consultants, whereas special vehicles of medical institutions should be assigned for such purposes. The share of such "calls" to the emergency medical service dropped to an average of 15.1% in RSFSR in 1981, but it is still extremely high, while the rate of its decline is insignificant.

This indicator was particularly high in 1981 in Novgorod, Pskov, Vladimir, Kostroma, Kamchatka, Magadan, Sakhalin Oblasts, Krasnodar and Krasnoyarsk Krays, Karelian and Kabardino-Balkar ASSR.

Distraction of the emergency medical service to perform duties that are not inherent in it is inadmissible from both the medical and economic points of view.

There is no need to prove that medical equipment must be used wisely in therapeutic and preventive, sanitary and epidemiological institutions, as well as pharmacies. The results of an inspection revealed that the quantity of uninstalled and unused equipment is decreasing more and more with each year; however, the attitude of administrators of some medical institutions toward this matter has changed little thus far. This is evident from the indicators for use of expensive and scarce fluorographic equipment. Practice shows that with good organization of work in two shifts, one can easily double the established standard per fluorograph--35,000-45,000 examinations per year. However, there are very wide fluctuations in fluorograph use, from a few thousand to 100,000 examinations per fluorograph, even within the limits of the same city. The indicators for krays, oblasts and ASSR's also differ drastically. For example, they have been low in recent years--from 5900 to 14,000 people per fluorograph per year--in Kaluga, Tomsk and Chita Oblasts, Kalmyk and Yakutsk ASSR. In 1980, there was considerable reduction in operation of fluorographs, as compared to 1979, in Krasnodarsk and Stavropol Krays.

There is no explanation for the level and dynamics of indicators. If we consider the poor local conditions, scarcity of transportation and absence of roads, fluorograph use should be considerably worse in Krasnoyarsk Kray, as compared to Krasnodar. However, in 1980, there were 23,400 examinations per fluorograph in Krasnoyarsk Kray and only 18,500 in Krasnodar Kray.

Inspections have shown that the poor use of fluorographs is attributable solely to poor organizational work by administrators of the relevant medical institutions.

There are flaws in use of stomatological equipment--chairs. The indicators of their use also differ in different administrative territories. The average load per [dental] chair constituted 4118 visits in 1981 in the RSFSR, the figures being 5923 in Maritime Kray, 4725 in Ulyanovsk Oblast, and only 2462 in Novgorod Oblast and 2704 in Chelyabinsk Oblast.

The administrators of public health institutions and agencies must constantly analyze the indicators for use of medical equipment (primarily expensive equipment), and organizing work in such a manner that each unit and instrument would be used with full return.

There is yet another matter that requires an economic approach, in addition to the medical one. The RSFSR Ministry of Health has insistently recommended for several years that rayon and interrayon specialized departments be deployed, as well as oblast (kray) and interoblast specialized centers, which are the basis for further improvement of the quality of medical services to the public.

In organizing specialized care, it is very important (from the standpoint of accessibility) to set it up at the early stages on a level that is not lower than the central rayon hospital (CRH), i.e., rayon or interrayon departments.

Mobile forms of specialized care are acquiring increasing importance.

It must be noted that the flow of patients referred for consultations and treatment from different rayons to oblast, kray and republic (ASSR) medical institutions differs in intensity. There is a drastic difference between

the number of patients referred from different administrative territories of RSFSR to republic (RSFSR) and Union centers of specialized medical care. Of course, the better the quality of medical care at CRH, the fewer patients are referred to an oblast (kray) hospital, and the better organized is specialized medical care in an oblast (kray, ASSR), and the smaller the flow of patients traveling to Moscow, Leningrad and other medical centers. Aside from its purely medical significance, this has profound economic sense, since transportation from stage to stage involves considerable expenses, both for the government and the patient personally.

Apparently, it would be desirable for administrators of health care institutions and agencies on the rayon (city) and particularly oblast (kray, ASSR) levels to analyze the flow of patients from the standpoint of both specialty and intensity (number of patients referred from stage to stage per 100,000 population), and, depending on their findings, to make the appropriate decisions, assess the performance of medical institutions and specialized services according to these indicators.

Under conditions where a movement for economy exists everywhere, it is utterly inadmissible for there to be instances of gross miscalculations and flaws in the financial management activities of administrators of medical and pharmaceutical institutions: disruption of payment discipline, accumulation of leftover materials and drugs in excess of the standards, unlawful expenditure of the wage funds, upkeep of service transportation in excess of the limit, etc. Experience shows that, with adoption of centralization and mechanization of bookkeeping, the number of infractions has dropped drastically and for this reason administrators of health care agencies, who make use of computer centers of statistical agencies, must expedite completion of centralization and mechanization of bookkeeping at all medical institutions, regardless of their size.

Inspection and auditing work in the health care system require constant improvement. Thus far, it has not been possible to eradicate instances of misappropriation of government equipment [or funds]. the RSFSR Ministry of Health is taking steps to intensify inspection-auditing work and control misappropriations. It is imperative for local health care agency administrators to constantly keep these matters in the center of their attention.

Every possible refinement of methods of public health management, more operational transmission and processing of information, prompt and optimum decision making in the management area are deciding factors of improving the efficiency and quality of operation of public health institutions and services and, consequently, wise and economic use of all financial, material and human resources.

Introduction into health care practice of automated control systems, use of economic and mathematical methods based on use of modern computer technology are instrumental in implementing these tasks. In this respect, the RSFSR Ministry of Health is taking steps to create a network of information and computer centers in health care agencies and departments of automated control systems at oblast (kray, republic) hospitals.

An increase in economic effectiveness in using all health care resources will help medical workers perform the main task ensuing from the decisions of the 26th CPSU Congress--further improvement of the quality of medical care of the public.

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## SOME PRACTICAL HEATLH CARE MEASURES TO IMPROVE THE DEMOGRAPHIC SITUATION

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 9, Sep 82  
(manuscript received 20 Apr 82) pp 7-12

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[Text] The decisions of the 25th and 26th CPSU congresses have provisions for implementation of an effective demographic policy, a system of measures to prolong the life and work activity of people and strengthen their health.

In the presence of adverse dynamics of demographic processes, which are characterized by decline of birthrate, increased mortality, increasing shortage of manpower resources, which have developed in several regions, there must be further improvement of the strategy and tactics of health care, the ultimate goal of which are to improve public health, lower morbidity, disability and mortality.

In this regard, the practical objectives of today's health care should be considered not only from the standpoint of traditional objectives of medicine and social hygiene, but in the aspect of the developing demographic situation, with consideration of problems of reproduction of the population and preservation of the nation's manpower resources.

Negative demographic processes have also affected Tula Oblast, which is one of the economically developed territories in the Central Russian Federation, with a marked industrial orientation. This oblast is notable for considerable prevalence of urban residents in the overall population (79.4% as of 1 Jan 1982) and high population density (73.7 people/km<sup>2</sup>). In 1979, people 60 or more years of age constituted a significant share of the population of Tula Oblast.

In recent years, the birthrate index became virtually stable at a low level (12.1/1000 population in 1970, 12.3 in 1979 and 12.2 in 1980); there is a trend toward rise of general mortality indicators, including individuals of employable age, particularly men. The rate of decline of infant mortality has slowed down (34.6/1000 births in 1960, 25.1 in 1970, 23.3 in 1978, 21.7 in 1979 and 22.0 in 1981). The indicator of primary disability is also high (58.0/10,000 employable population in 1979 and 61.5 in 1981). The negative demographic shifts, which are aggravated by interoblast and intraoblast migration (particularly of the rural population) are typical of virtually all cities and rayons in this oblast.

In a report he delivered to a plenum of the Tula CPSU obkom (10 Dec 1981), comrade I. Kh. Yunak, first secretary of the obkom and member of the CPSU Central Committee, remakred that "... the demographic situation in the oblast, as in the nation as a whole, is presently complicated. But this is not a reason to whine. This cannot be transformed into a screen, behind which some administrators are not loath to hide all their organizational troubles."\* The statement of the oblast party organization is also entirely and fully applicable to the practical performance of public health agencies and institutions, the entire medical community, whose job is to assure the fitness of manpower resources of our country. Of course, this requires elaboration of a long-term special-target program of action on the part of health care agencies and therapeutic-preventive institutions to improve medicodemographic processes.

Guided by the decision of the board of the RSFSR Ministry of Health on 2 April 1979, "Tasks for Health Care Agencies of the Russian Federation With Regard to Implementation of Measures to Improve Demographic Processes in This Republic," the Tula oblast health department has been devoting, since 1979, much attention to analysis of the nature and causes of occurring medicodemographic processes and development of specific measures to improve them, by means of annual combined plans of organizational-medical and sanitary-hygienic measures, orders, decrees of the board, analytical guides on the health status of the public and performance of therapeutic and preventive institutions.

Though this appears paradoxical, it was necessary to overcome some degree of conservatism of a number of health care organizers and practicing physicians. In the justifiable belief that any physician is called upon to fight for the life and health of every patient, many qualified specialists and public health organizers perceived talk about the demographic situation as something abstract and not directly of their concern. By virtue of previously established traditions, preparation of reports on and evaluation of performance of health care agencies of cities, rayons, therapeutic-preventive institutions and departments amount essentially to recording whether planned measures were or were not performed. They consider the following to be problems that must be solved immediately: health care budget, capital construction, repair and refurbishment, growth of the network, providing the public with medical personnel and hospital beds, number of visits to physicians and days of bed occupancy, volume of work done by ancillary services, departments and offices, coverage of the public with periodic and special-purpose preventive examination, fullness of coverage with dispensary care for some diseases, mean duration of treatment, etc.

They were much less concerned with the end results of the health care service: birthrate, infant, perinatal and general mortality, morbidity, traumatism, disability in different population groups, efficacy of therapeutic and preventive measures, sociomedical rehabilitation, etc., i.e., issues that are not presently deciding in assessing the results of management work of territorial health care agencies. For this reason, it became necessary for administrators of agencies, institutions and departments, as well as health care specialists, to be able to analyze the principal medical and demographic indicators and, on this basis, make validated management decisions.

\*KOMMUNAR newspaper, 10 Dec 1981 (No 286).

In 1980, special educational-methodological seminars were held for chief physicians, their deputies, department heads, chief and nonstaff specialists on the topic of "Methods of calculating and analyzing the main medicostatistical and demographic indicators." An abstract manual for organizers was published in a very large printing for the same purpose: "Role of Statistical Information to Management of Health Care Institutions." In one section of the televised class on advanced training of organizers in the oblast, which was offered by the Central Institute for Advanced Training of Physicians in 1981, much attention was devoted to questions of medical demography. The office of the head of the First Moscow Medical Institute, its party committee and departments are giving much assistance to the Tula health care service in work to advance the qualifications of physicians, including administrators.

In addition to traditional class training of medical statisticians, a permanent seminar was organized and is presently functioning to improve the reliability and accuracy of incoming medical statistical and demographic information, and it devotes special attention to methods of calculating, processing and comparing the main qualitative indicators.

There has been a radical revision of the scope, structure and composition of tables in the annual statistical guide of indicators of health status of the public and performance of the oblast's therapeutic and preventive institutions. Both the tables and textual summaries of sections of this guide are governed by the main goal of shedding comprehensive light on the dynamics of public health in order to help administrators of territorial health care agencies to compare the end results they have achieved to the analogous indicators for other cities and rayons, the oblast as a whole and the mean data for the Russian Federation. Since 1980, this guide publishes data on the structure of overall morbidity among the inhabitants of this oblast broken down according to causes, sex and age. An agreement has been reached with the oblast information and computer center of Gosstatistika [State Committee for Statistics?] concerning processing of all records pertaining to deaths on the city and rayon level for our oblast using computers, and the appropriate algorithm and program are being developed for this purpose.

Several organizational measures have been implemented, which were instrumental in inculcating a sense of responsibility in administrators for the job assigned to them and the end results of their work, specificity and business-like attitude, irreconcilability with flaws, making great demands of oneself and subordinates, high business and executive discipline, profound and firm knowledge about the indicators achieved (including medicodemographic ones) and the ability to draw concrete conclusions on their basis.

A radical revision has been made of the positions listed in the nomenclature for the oblast health department; assessment was made of the performance of health department heads, chief physicians and their deputies, chief and non-staff specialists (including the rayon level); questions of their assignments or release from positions, assignment or removal of a qualification category and possibility of double duty [holding more than one job] have been examined. Problems of moral and material incentives have been directly related to the end results of activity of the institutions, services that they supervise, as well as special directions and indicators of health status of the groups serviced.

A procedure was established for personal delivery of reports by administrators of therapeutic and preventive institutions to increase the responsibility of administrators of health care institutions for reliability of medical statistical reports, which was started in 1979.

The statistical reports for 1981 were furnished by all administrators of territorial health care agencies in the oblast, and in accepting them special significance was attributed to medicodemographic indicators.

The most experienced health care organizers--chief physicians of oblast institutions and their deputies--were assigned as the chief curator-preceptors for each city (rayon) to assist the administrators of medical institutions. The trends formed in the course of a year in medicodemographic processes in the corresponding territories are determined with their immediate participation, and they are also involved in working out the necessary organizational and management measures.

The annual reports of all therapeutic and preventive institutions are analyzed by members of the oblast acceptance commission, oblast specialists, services and main curator of a rayon. On the basis of these reports, the necessary express information is prepared, a conclusion is drawn about the main indicators and end results of health care work in the corresponding city (rayon). During the period of submittal of annual statistical reports, the head of the public health department (chief physician of central rayon hospital) speaks at a meeting of the board of the oblast health department in the presence of administrators of subordinate institutions, their deputies and rayon specialists. Indicators of birthrate, mortality (in particular, its structure and especially at an employable age), efficacy of preventive physicals and dispensary observation are submitted to in-depth analysis. The level and dynamics of general morbidity, particularly morbidity involving temporary disability, are determined for the serviced enterprises, kolkhozes, sovkhozes, as well as primary disability, etc. Determination is also made of the "weak points," in both the health status of the public and performance of medical and sanitary institutions, and the means of eliminating them are outlined. The results of analysis are discussed at meetings of the medical worker aktivs in all cities and rayons of the oblast and the oblast health care worker aktiv, and they serve as the basis for working out concrete socialist obligations for the next year, as well as corrections to the combined [comp. ex] work plans. Thus, determination is made, already at the beginning of the year, of the main tasks for oblast, city and rayon health care, special directions and services.

In the course of the year, the progress in implementing decisions and their influence on the main medicohygienic and demographic indicators are examined at meetings of the board, operational meetings and in orders of the health department. This applies in particular to regions, therapeutic-preventive institutions and services whose condition causes some alarm, and here too the main criterion for assessing efficiency of work and development of medical-organizational measures is the level of end results achieved and measures to improve them.

Long-term plans of measures for 1981-1985 have been approved, which deal with lowering infant, perinatal and maternal mortality, incidence of tuberculosis, improvement of cardiological and pulmonological care of the oblast's residents. Measures were developed at joint meetings of the boards of the oblast health

department and internal affairs administration for treatment and vocational re-training of chronic alcoholics, to intensify prevention of highway and vehicular traumatism, control the spread of venereal diseases.

Problems of lowering primary disability, improving therapeutic and preventive care of the aged and disabled were examined with the participation of the board of the oblast social security department. Together with the oblast public education department, work is being done to improve the health of boarding school students, further improvement of health status and physical development of Tula school children. Steps were worked out, with the immediate participation of the state social insurance department to lower morbidity involving temporary disability at enterprises, institutions and building organizations in the oblast. Together with the administration for public eating facilities, an order was issued about development of dietetic nutrition for workers in the 11th Five-Year Plan, with yearly assignments.

There was comprehensive examination of the status and flaws in organization of oncological, phthisiological, stomatological, rheumatological, traumatological and orthopedic, emergency, ambulance, allergological and other forms of specialized services to the public.

The oblast sanitary and epidemiological station, with the participation of administrators of enterprises under a number of ministries and agencies, have developed concrete measures for 1981-1985 to protect and improve the environment, to eliminate in stages the deleterious factors that could have an adverse effect on human health and life. There are no more rigid requirements for adhering to sanitary and epidemiological conditions in obstetric and pediatric hospitals.

Steps have been outlined to improve medical supervision of adolescents and organize in-depth physicals for newlyweds, intensify campaigning for a healthy life-style, elimination of flaws in the work pertaining to control of alcohol abuse at medical institutions in the oblast.

Several medical management measures were implemented to increase the role of administrators and specialists of oblast hospitals, dispensaries and services in the management of specialized medical care, improvement of organizational-methodological and local scheduled consultant work. There has been expansion of the composition, rights and duties of the oblast coordinating council for organizational and methodological work. A commission was established to inspect and reclassify the specialized bed and polyclinic network with consideration of the medicodemographic situation in different regions. A system of brigade oversight ["curatorship"] of health care in cities and rayons of the oblast has been developed and is being refined.

The set of basic tasks for public health to improve demographic processes was discussed in detail at a methodological conference of administrators, specialists and curator-physicians of oblast therapeutic and preventive institutions. Since these tasks are a deciding factor for long-term health care management, summaries of the main report delivered at this conference were forwarded to chief physicians of oblast hospitals, dispensaries, services, chief rayon curators and oblast specialists.

In the course of this work, several administrators of public health agencies and institutions were found to have little competence in matters of management and failed to bear proper responsibility for their work; they were undisciplined, did not provide supervision for the areas of work assigned to them and did not achieve the necessary end results. Some of them were relieved of their jobs. Competent, responsible and promising organizers replaced them.

Within a relatively short period of time, it is difficult to expect substantial results from the above-mentioned organizational-medical and management measures. However, a comparison of the main medicodemographic indicators for the last 2 years showed that there is a trend toward improvement or stabilization of many of them. Thus, in 1981 there was stabilization of general mortality indicators, infant and perinatal mortality declined (from 23.9 to 21.6/1000 for the former and from 16.7 to 15.2/1000 for the latter). Morbidity among workers in the main sectors of industry decreased by 3.5% in cases and 2.7% in days off work; for a number of sectors, the latter indicator dropped as follows: by 9.2% in enterprises of the chemical and petrochemical industry, 11.5% in those related to energy and electrification, 7.0% in the coal and construction industries, 8.4% among sovkhoz workers, 3.8% among kolkhoz workers, etc.

Morbidity and bacillus carriers among patients with tuberculosis have declined. The indicator of detection of tuberculosis in preventive physicals has grown (from 0.4 to 0.5/1000 examined). The quality of oncological care has improved.

Hospital bed occupancy constituted 337 days in urban hospitals and 319 days in rural ones in 1981. At the end of 1981, there were 2145 residents per regular position of uchastok internist and 794 children per uchastok pediatrician.

As compared to 1980, there has been a 9.1% reduction in complaints and reports by working people concerning flaws in organizing medical care, and other qualitative indicators have also improved.

After summarization and comprehensive analysis of the efficacy of instituted measures, the oblast health department issued the order, "On further health care measures in the oblast to improve the medicodemographic situation," which confirmed the long-term plan of work for 1981-1985 aimed at beneficial development of demographic processes. Articles dealing with medical demography, which were published in the journal, ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, in 1977-1981 were used in preparing these documents.

At the present time, it is planned to organize an oblast interagency commission for demographic measures.

It should be noted that it is necessary to further upgrade the work of public health agencies and institutions in the area of improving medicodemographic processes.

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BIOMETRIC ANALYSIS OF AVERAGE LIFE EXPECTANCY OF THE INHABITANTS OF SOME OBLASTS IN THE NONCHERNOZEM ZONE

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 9, Sep 82  
(manuscript received 10 Dec 81) pp 12-16

[Article by V. D. Brezgin and A. V. Belov, Yaroslavl]

[Text] At the present time, implementation of an effective demographic policy is a rather urgent matter; one of its main directions is a system of measures to prolong the life and period of work activity of people, to strengthen their health. It is known that an unfavorable demographic situation developed in the 1970's in some parts of the RSFSR: new trends in the dynamics of mean life expectancy (MLE). We have made an attempt here to analyze the dynamic MLE indicator for the inhabitants of Yaroslavl, Kostroma and Vologda Oblasts over a 20-year period according to the records of the last three censuses (1959, 1970, 1979).

Analysis of MLE indicators is one of the methods of studying mortality. The data obtained with this method characterize the most correctly the mortality rate at a given time and they enable us to gain a correct idea about the dynamics of mortality, since the structural changes in the population do not influence these indicators.

The dynamics of the MLE indicator differ in men and women. The general pattern for the 1959-1970 period was stabilization of this indicator in the male population, both urban and rural, and appreciable rise for all groups of the female population. This led to an increase in the gap between the MLE indicator for males and females from an average of 10 years in 1958-1959 to 12.5 years in 1969-1970. In the 1970's, there was stabilization of the MLE indicator for the female population and appreciable decline in all groups of the male population, particularly in rural areas (Table 1). It should be noted that the difference between MLE indicators for the urban and rural population is affected, in particular, by migration, which leads to departure of healthy people from rural areas and indirectly raises mortality among the remaining inhabitants. These dynamics of the MLE indicator require comprehensive demographic-statistical analysis.

In order to determine the causes of change in MLE, calculation was made of indicators of mean life expectancy for the 0-14 year age group, population of employable age (15-59 years for men and 15-54 years for women) and older groups. At 0-14 years of age and above the employable age, the MLE indicators have

Table 1. Dynamics of MLE indicators (%) for inhabitants of Yaroslavl, Kostroma and Vologda Oblasts

OBBLAST	MEAN LIFE EXPECTANCY FOR NEONATES										MEAN LIFE EXPECTANCY AT EMPLOYABLE AGE FOR THOSE WHO SURVIVED TO THIS AGE										
	MALE			FEMALE			MALE			FEMALE			TO LEVEL OF 1958-1959		TO LEVEL OF 1969-1970		TO LEVEL OF 1958-1959		TO LEVEL OF 1969-1970		
	TO LEVEL OF 1958-1959	1969-1970	1969-1970	TO LEVEL OF 1958-1959	1969-1970	1969-1970	TO LEVEL OF 1958-1959	1969-1970	1969-1970	TO LEVEL OF 1958-1959	1969-1970	1969-1970	1958-1959	1958-1959	1958-1959	1958-1959	1958-1959	1958-1959	1958-1959	1958-1959	
YAROSLAVL																					
URBAN POPULATION	101,4	98,9	97,5	102,6	102,8	100,1	99,0	97,1	98,0	100,5	100,3	100,5	99,7								
RURAL	98,8	92,9	94,0	102,9	101,3	98,4	98,0	93,2	95,1	100,3	98,5	100,3	98,2								
KOSTROMA	"	101,5	102,0	100,5	103,1	103,2	100,1	99,0	95,8	96,8	100,5	98,2	97,7								
URBAN	"	100,2	95,6	95,4	103,5	102,1	98,6	98,5	89,8	91,2	100,8	97,2	96,4								
RURAL	"	103,8	102,8	99,0	103,4	104,4	101,0	99,8	95,8	96,0	101,0	99,2	98,2								
VOLOGDA	"	101,2	99,7	98,5	103,2	104,2	101,0	97,8	92,0	94,1	100,8	98,9	96,1								

either shown a trend toward constant rise or were stabilized in the last 10 years. The situation was different with regard to the employable group (see Table 1). Here, there has been a decline of MLE, starting in 1959 for men and 1970 for women, and this indicator was lower in all population groups (with the exception of urban women in Yaroslavl Oblast) in 1978-1979 than in 1958-1959.

In order to see how the change in mortality indicator as related to different causes of death affects the dynamics of MLE, in preparing the life expectancy table the base age-related indicators of mortality due to the cause studied should be replaced with new ones, while mortality referable to other causes should be left at the former level.

Table 2 lists MLE indicators for residents of Yaroslavl Oblast in 1969-1970 and data that were calculated with replacement of age-related indicators of mortality due to cardiovascular diseases, malignant neoplasms and traumatism (each separately) in 1969-1970 with the age-related coefficients for 1978-1979, with mortality referable to other causes at the 1969-1970 level. It is apparent from the listed data that, for the period under study, the decline of MLE indicator as a whole (including the employable age group) was attributable mainly to rise in mortality due to cardiovascular diseases and traumatism. At the same time, the dynamics of mortality referable to malignant neoplasms presented a positive orientation and caused some slowing of the rate of decline of MLE indicators.

In order to draw the correct conclusions, one must have a clear idea about the possibilities and limits of using different methods of demographic analysis to solve medicodemographic problems, i.e., depending on the nature of the given problem it is important to choose a method that would best conform to the objectives of the study.

Table 2. Effect of change in mortality due to certain causes on dynamics of MLE indicator for the inhabitants of Yaroslavl Oblast

MLE	NEONATE LIFE EXPECTANCY				LIFE EXPECTANCY AT EMPLOYABLE AGE FOR THOSE WHO SURVIVED TO EMPLOYABLE AGE			
	MALE		FEMALE		MALE		FEMALE	
	URB	RUR	URB	RUR	URB	RUR	URB	RURAL
1969-1970								
a) WITH MORTALITY DUE TO CARDIOVASCULAR DISEASES IN 1978-1979	63,2	59,6	73,6	73,5	40,8	38,9	39,2	39,2
b) WITH MORTALITY DUE TO MALIGNANT NEOPLASMS IN 1978-1979	62,3	58,3	72,8	72,8	40,7	38,6	39,2	38,8
c) WITH MORTALITY DUE TO TRAUMATISM IN 1978-1979	63,5	59,3	73,9	74,0	40,9	38,8	39,2	39,0
1978-1979	61,9	58,5	73,4	73,5	39,9	38,1	39,1	38,9
	61,6	56,0	73,7	72,3	40,0	38,0	39,1	38,3

Note: In items a), b) and c) mortality due to other causes was on the 1969-1970 level

Table 3. Maximum elimination reserves for prolonging mean life expectancy as related to the principal causes of death (in years)

CAUSES OF DEATH	FROM 15 TO 60 YEARS				TO 85 YEARS			
	MALE		FEMALE		MALE		FEMALE	
	URB	RUR	URBAN	RURAL	URB	RUR	URBAN	RUR
DISEASES OF CIRCULATORY SYSTEM	1,0	1,3	0,3	0,6	11,0	12,4	6,4	6,8
MALIGNANT NEOPLASMS	0,6	0,7	0,4	0,3	6,5	6,0	3,3	2,4
TRAUMATISM	3,0	5,5	0,4	0,65	8,25	13,8	1,5	1,9
DISEASES OF RESPIRATORY ORGANS	0,2	0,4	0,1	0,2	3,4	4,85	1,3	2,0

Usually, determination is made of the possible increment of MLE indicator on the assumption that the cause studied is eliminated to determine the influence of a specific cause of death on MLE. Let us see to what extent this method could be used to analyze mortality. The magnitude of the elimination reserve (reserve for raising MLE indicator with elimination of mortality due to the cause under study) can be presented in the following form:

$$e_0^{-i} - e_0 = \frac{\sum_0^w l_x^{-i} (l_0 - l_x^i)}{l_0^2},$$

where  $e_0$  is MLE,  $e_0^{-i}$  is MLE with the hypothesis that the  $i$ th cause of death has been eliminated,  $l_x^{-i}$  is the number of surviving individuals from the

mortality tables for calculation of  $e_0^{-i}$ ,  $l_x^i$  is the number of survivals from the mortality tables in which only the  $i$ th cause of death is involved and  $l_0$  is the initial value in mortality tables.

Let us briefly explain how this formula was obtained. According to the exponential formula, the probability of death is  $q_x = 1 - e^{-mx}$ , where  $e$  is the base of natural logarithms,  $m_x$  is the age-related mortality index (arbitrarily considered to equal mortality at the age of  $x$ ). Hence,  $m_x = -\ln p_x$ , where  $p_x$  is the probability of reaching the expected age. Considering that  $m_x = m_x^i + m_x^{-i}$ , we shall have  $\ln p_x = \ln p_x^i + \ln p_x^{-i}$ . In other words, according to the theorem of multiplication of probabilities, we shall have  $p_x = p_x^i \cdot p_x^{-i}$ . We shall further show that  $l_0 \cdot l_x = l_x^i \cdot l_x^{-i}$ . For this, the following transformations will be required:

$$\begin{aligned} l_0 \cdot l_1 &= l_0 \cdot l_0 \cdot p_0 = l_0 \cdot p_0^i \cdot l_0 \cdot p_0^{-i} = l_0^i \times \\ &\quad \times l_0^{-i}; \\ l_0 \cdot l_2 &= l_0 \cdot l_1 \cdot p_1 = l_1^i \cdot p_1^i \cdot l_1^{-i} \cdot p_1^{-i} = \\ &= l_2^i \cdot l_2^{-i} \text{ etc.,} \\ \text{i.e., } l_0 \cdot l_x &= l_x^i \cdot l_x^{-i}. \text{ Then by multiplying} \\ \text{in formula } e_0 &= \frac{\sum l_x^i}{l_0} - 0,5 \text{ the numerator and} \\ \text{denominator of } \frac{\sum l_x^i}{l_0} &\text{ by } l_0, \text{ we} \\ \text{shall have:} & \end{aligned}$$

$$e_0 = \frac{\sum l_x^i \cdot l_x^{-i}}{l_0^2} - 0,5.$$

$$\text{Since } l_0^{-i} = \frac{\sum l_x^{-i}}{l_0} - 0,5,$$

we derive the formula:

$$e_0^{-i} - e_0 = \frac{\sum_{i=0}^w l_x^{-i} (l_0 - l_x^i)}{l_0^2}.$$

It is apparent from this formula that the elimination reserve depends not only on mortality due to the cause under study, but mortality due to all other causes. The lower the mortality due to other causes, the greater will be the reserve. This explains, in particular, the fact that with the hypothesis of complete or partial elimination of a specific cause of death there is increase in influence of other causes on the new MLE level, as well as that the effect of eliminating two or more causes of death simultaneously yields a greater gain in life expectancy than the sum of gains as a result of eliminating each of these causes separately.

Thus, the use of such a method for analysis of mortality due to specific causes requires special stipulations, and the results then obtained are not very suitable for comparisons, because of the influence on them of the structural factor (in this case  $l_x^{-i}$ ).

The formula also shows that the elimination reserve for a specific cause of death will be at a maximum in the case where only this cause of death is involved (i.e., when  $\bar{l}_x^i = l_0$ ). In this case, the magnitude of the reserve will be determined only by:

$$l_0^i = \frac{\sum l_x^i}{l_0} - 0,5$$

the MLE, calculated with the hypothesis that only the cause of death under study is involved. For this reason, special life expectancy tables are used, which are based on age-related indicators of mortality due to one of the causes, for investigation of mortality according to its causes (including their influence on MLE). Using these tables, one can study from the same methodological vantage points the mortality rate according to causes in heterogeneous population groups. This approach makes it possible to avoid mistakes and inaccuracies that are determined by the influence of structural changes. The number of "underlived" years [years between time of death and life expectancy] calculated from these tables will constitute the maximum elimination reserve.

At the present time, cardiovascular diseases are in first place among causes of death. However, it must be borne in mind that a significant part of them are unavoidable (deaths at an advanced age due to atherosclerotic involvement of the heart and brain) and for this reason, the possibility of extending MLE diminishes somewhat. With this in mind, mortality due to traumatism is advanced to the fore for males. A comparison of reserves for extending the MLE shows that they are greater for men with regard to all causes of death than for women. The same applies to rural and urban population. The mortality rate referable to the main causes (with the exception of malignant neoplasms) is higher in the former (Table 3).

However, in real life, one encounters a population that has a concrete age and sex structure. For this reason, it is important to know the causes that lead to the greatest loss to society. On the one hand, one can investigate the structure of deaths according to causes in order to determine the difference between deaths due to one cause and deaths due to another cause. However, such assessment of mortality rate is obviously insufficient, since it does not take into consideration the degree of prematurity of death due to different causes. The MLE indicator at each age could serve as such a gauge for individuals who lived up to that age. By adding up for all ages the product of number of deaths multiplied by mean life expectancy one can determine the loss of life potential due to deaths per year. After this, it is not difficult to calculate the structure of this loss according to causes of death.

Let us examine the structure of loss of potential according to causes. We shall take two types of potentials for analysis: overall potential of the population and partial potential for the entire population during the employable age period (Table 4). Traumatism is the cause of maximum loss of potential man-years for males, and this cause of death is responsible for over half the entire loss of male potential referable to the employable age period and most of the loss of potential, as compared to other causes, for women. In women, circulatory diseases are in a leading place in the structure of loss of full life potential. We were impressed by the larger share of respiratory diseases in the structure of loss of potential referable to the employable age period.

This loss was attributable chiefly to mortality due to pneumonia in the first year of life.

Table 4. Structure of loss of life potentials (%)

CAUSE OF DEATH	FULL LIFE POTENTIAL				LIFE POTENTIAL FOR EMPLOYABLE AGE PERIOD			
	MALE		FEMALE		MALE		FEMALE	
	URB	RUR	URB	RUR	URB	RUR	URBAN	RURAL
CIRCULATORY DISEASES	24,8	25,8	43,8	57,3	13,3	11,6	9,5	12,8
MALIGNANT NEOPLASMS	14,1	11,3	21,4	13,9	7,9	6,9	15,8	8,8
TRAUMATISM	37,0	40,7	11,0	8,1	50,5	56,9	24,1	20,6
RESPIRATORY DISEASES	9,4	10,3	14,6	8,9	9,3	10,1	17,9	23,9
OTHERS	14,7	11,9	9,2	11,8	19,0	14,5	32,7	33,9

Of course, the study of mortality processes in the aspect described here covers only the very narrow range of questions that have been reflected in the title of this article. And, without exceeding the limits of traditional methods of statistical analysis of mortality, an effort has been made to define and enlarge upon some of them. Demonstration and in-depth analysis of relationships to socioeconomic and biomedical factors are necessary for comprehensive investigation of this problem. The study of mortality must be closely related to a combined [complex] assessment of the health status of society. This approach implies the wide use of modern methods of multidimensional statistical analysis and computer technology. Development of an effective demographic policy in the area of mortality should be the end objective of solving this problem.

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## PRESSING PROBLEMS OF UPGRADING POLYCLINIC CARE OF THE PUBLIC

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 9, Sep 82  
(manuscript received 18 Nov 81) pp 16-20

[Article by V. V. Kirillov and A. L. Lindenbraten, candidates of medical sciences, All-Union Scientific Research Institute of Social Hygiene and Organization of Health Care imeni N. A. Semashko, USSR Ministry of Health, Moscow]

[Text] The role and importance of polyclinics, dispensaries and walk-in offices in rendering medical care to the public were stressed in particular in the decisions of the 26th CPSU Congress.

In recent years, health care agencies and institutions conducted purposeful work to upgrade polyclinic care of the public: there was strengthening and development of the territorial-district principle of rendering medical services, the dispensary method of working was introduced extensively to the activities of physicians in all specialties, there was implementation of the process of combining polyclinics and hospitals into hospital-polyclinic complexes, the scope of specialized forms of polyclinic care was broadened, etc.

At the same time, development of polyclinic care is still behind the needs of the public and, in a number of instances, does not meet modern requirements. There are substantial flaws in the performance of outpatient-polyclinic institutions, many questions require immediate and radical answers.

In view of these circumstances, special studies were conducted in several large cities of RSFSR for the purpose of elaborating recommendations to optimize therapeutic, diagnostic and preventive processes in rendering medical services to the adult urban population in different types of polyclinic institutions.

The following methodological procedures were used, depending on the concrete objectives of the study: analysis and generalization of data in the literature, official sources and results of special research at the institute; immediate ["instantaneous"] observations and expert evaluation of quality and efficacy of the therapeutic and diagnostic process in the polyclinic; study, analysis and generalization of working knowhow of polyclinic institutions and district internist ["medical therapists"--medical practitioners]; sociological studies of different aspects of polyclinic work; experimental work to introduce into polyclinic work specially developed statistical materials, etc. [District = uchastok]

The results of these studies revealed that the district internist plays the leading role in the system of organizing polyclinic care of the public, both at the polyclinic and in the home. It would be desirable to further integrate the work of district physicians and specialists in other fields at polyclinic institutions, with strengthening of the leading role of district internists. Physicians in other special fields should work under the immediate supervision of the internists and perform the full scope of their functions, rather than limit themselves solely to consultant work.

At the same time, some flaws were found in the performance of district physicians and polyclinic institutions.

The internists do not have information about the age and sex composition of the population, number of adolescents, disabled veterans of the Great Patriotic War. The "district identification certificates," which exists in some polyclinics, are kept up in an arbitrary fashion and do not contain all the information necessary for the operational work of district physicians.

There are infractions in implementing dispensary care of the public in most out-patient polyclinic institutions. Analysis of the work of district internists in a number of polyclinics revealed that coverage with dispensary supervision does not exceed 40% for some nosological forms, prompt detection of some diseases constitutes 37%, coverage by therapeutic and health-improving measures is at 75-80% and primary disability 3-5%. Moreover, it was found that there are no unified approaches to assessment of the quality and efficacy of dispensary supervision. As a rule, the district internists do not have information about the dynamics of disability among patients referable to internal medicine over a number of years. Yet dispensary care of the public is presently one of the most important and difficult tasks for health care agencies and institutions, since it consists of a set of broad socioeconomic, sanitary-hygienic and therapeutic-preventive measures.

The success of the work of district internists and solutions to the problems of prompt and high-quality medical care of the public depend largely on the physicians' ability to analyze the main indicators of their performance and, on this basis, to elaborate specific therapeutic and preventive measures. Regular analysis of work with reference to the main indicators is instrumental in improving the efficacy and quality of the work of district internists and polyclinic institutions as a whole, intensifying surveillance [monitoring, supervision] of the main areas of work of the structural departments of polyclinics, operational control of the therapeutic and diagnostic process. However, it was noted that most district internists, as well as the administrators of polyclinic institutions, do not devote enough attention to in-depth and purposeful dynamic analysis of their work over a period of several years.

One of the most substantial flaws in the work of many health care institutions is that there is not sufficient continuity in examining and treating patients.

Problems have been found in polyclinics with regard to patient referral for scheduled [routine] hospitalization: only about 50% of those requiring hospital care are admitted promptly. The vast majority of physicians mentioned the shortage or even absence of vacancies at hospitals assigned to polyclinic patients as the chief cause of unsatisfactory hospitalization.

In many instances, patient examination in polyclinics prior to scheduled hospitalization is not complete enough: the necessary diagnostic laboratory tests and consultations with specialists are not performed; the dates for scheduled hospitalization are postponed at many polyclinics (particularly self-contained ones); the accompanying records sent to the hospital do not always meet the requirements.

There are also substantial flaws referable to the periods of follow-up treatment as outpatients after discharge from the hospital and medical rehabilitation. Not infrequently, these measures are limited only to passive preparation of medical certificates [disability certificates] for the patients without administering the treatment recommended by the hospital. It has been established that almost every 4th patient (23%) continues with outpatient treatment after being discharged from the hospital, 19.8% being treated for 1 to 3 days and 46.9% for more than 10 days. This refers mainly to patients with diseases of the cardiovascular system and digestive organs. However, the hospital recommendations are followed at polyclinics in only 77.6% of the cases, the breakdown being 78.5% of the cases for further patient management on an outpatient basis, 79.8% for dietetic nutrition, 74.4% for sanatorium and resort therapy, 69% for vocational guidance and 68.4% for being placed on the dispensary rolls. As a result, the response to therapy administered at the hospital is not reinforced, the period of remission is reduced when there is favorable course of illness, and it becomes necessary to rehospitalize patients, which leads to unwise use of bed resources of hospitals and prolongs temporary disability.

Thus, the lack of proper relationship in the work of polyclinics with the hospital inflicts some detriment to public health economics and hinders achievement of the main goals that were pursued when polyclinics and hospitals were united, continuity at all stages of patient treatment, rapid introduction into polyclinic work of new equipment and methods of examining and treating patients, which are used at hospitals, and mutual acquisition of knowhow by polyclinic and hospital physicians.

Rehabilitation commissions have not been organized at all polyclinics. These commissions, which work under the direct supervision of deputy chief physicians for therapeutic work, are instrumental in joint management and increased competence in solving different problems of therapeutic work, and they constitute a sort of school for advanced training, particularly for young medical specialists.

The level and quality of outpatient polyclinic care are largely determined by the training and qualifications of physicians. Thoroughness of patient examination, prompt and proper diagnosis, and the outcome of disease depend on the professional level, training, education and attitude of physicians toward their duties. It has been established that over one-third of the district physicians in urban polyclinics had not undergone advanced training for more than 5 years, and only 48.0% of them have qualification categories [ratings?]. Sociological studies have confirmed the fact that many physicians in different specialties do not have the opportunity to advance their knowledge independently (in particular, to regularly read the medical literature in their field), which is attributed in most cases to insufficient free time and work overload.

The results of a questionnaire survey revealed that the following are the principle factors involved in unwise use of work time by polyclinic physicians: filling out medical documents (97.6% of those questioned), working without paramedical personnel (58.2%), meetings and conferences during work hours (30.4%), absence of necessary means of communication and office equipment (44.8%).

Offices for prephysician visits, which reduce the work load of physicians considerably, since they relieve them of work that does not require the competence of a physician, have not been organized at all polyclinic institutions. Yet it has been established that up to 15% of the total number of expected visits to district internists is referable to such offices.

In outpatient-polyclinic institutions, not enough attention is still being given to economic incentives for medical worker performance. The administrators of health care agencies and institutions generally use only moral incentives for the performance of their teams (expression of appreciation, bestowal of certificates, etc.).

The results of a study revealed that proper attention is not always given to the importance of breaking down the territorial medical districts: there are an average of 2300-3500 adults per medical district and 4000 in some polyclinics.

The public's high requirements with regard to consultations, has resulted in various organizational forms of providing them in health care practice: consultant polyclinics at scientific research and medical institutes, oblast (kray, republic) hospitals, consultation and diagnostic centers (rayon and interrayon), independent specialized consultant polyclinics.

The results of this study made it possible to give a good rating to the organization of consultant services for the urban population in consultation polyclinics of clinical hospitals and, at the same time, to detect some flaws in rendering this type of medical service. According to an expert assessment, for example, the quality of medical records forwarded from territorial to consultant polyclinics was good in only 29.9% of the cases, satisfactory in 55.1% and unsatisfactory in 15.0%. The results of consultations were forwarded to the territorial polyclinic institutions at the most varied intervals: within 10 days in 46.6% of the cases, 11 to 20 days in 3.4%, 21-30 days in 2.3% and over 30 days in 44.2%. In 3.5% of the cases, the physicians at territorial polyclinics never received the findings of consultations. The delay in giving these reports (11 to 30 days) was usually related to hospitalization of patients in clinical hospitals right after the consultations.

Investigation of the work of specialized consultant polyclinics led to the conclusion that creation of such polyclinics as the second stage in rendering specialized polyclinic services to the inhabitants of large cities is a promising direction of development of extramural medical care. It is believed that the specialized consultant polyclinics should be based at the polyclinic departments of large general [multispecialty] hospitals. The absence to this time of elaborated forms of medical records that have been approved by health care agencies at consultant institutions makes the work of these institutions quite difficult.

The above-mentioned flaws in the work of polyclinic institutions have, in a number of instances, an adverse effect on the quality of medical care rendered to the public, prompting justifiable claims.

The material we have submitted offers rather convincing evidence of the great importance of upgrading polyclinic care of the public, and it enables us to outline some means of eliminating the existing flaws in its organization.

The attention of health care agencies and institutions, as well as scientific research groups, should be directed, specifically, to continuing research to improve organization of the work of medical districts, reinforcing the leading role of district internists in organizing polyclinic care for the public, improving the system of their training, advanced training and economic incentives, completing work to break down medical districts into smaller ones.

In addition, we must achieve an increase in scope, quality and efficacy of dispensary supervision, lower morbidity involving temporary disability, effect regular and in-depth analysis of the performance of both individual physicians and polyclinic institutions as a whole.

Work must be pursued to upgrade the system of routine [scheduled] hospitalization of patients with refinement of the list of necessary diagnostic laboratory tests at the prehospital stage for different groups of diseases, unification of documents forwarded to the hospital when a patient is admitted, more intensive supervision on the part of department heads of patient referral to hospitals, following hospital recommendations, etc.

Considering the importance of consultant work in the therapeutic and diagnostic process, special attention should be given to investigation of the need for such services, development and approval of standard forms of medical records for consultant institutions, which would improve continuity between territorial and consultant institutions.

Performance of the above-mentioned tasks will help upgrade the work of outpatient polyclinic institutions and improve the quality of extramural medical care.

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ATTENTION: EXPERIENCE. OPEN DOOR POLICY

Moscow IZVESTIYA in Russian 21 Jan 83 p 3

[Article by special correspondent of "Izvestiya" S. Bablumyan, Yerevan]

[Text] Many of us are familiar with the situation: somebody in the family gets sick. A consultation with an experience specialist is needed. As a rule, such an individual works in a clinic and, in order to reach him, it is necessary to obtain a referral from public health officials. Since, very often, the patient himself cannot take care of it, the burden falls on healthy family members. Walking through all the offices, trying to obtain all the necessary papers, work time must be sacrificed. And so it happens that many a work day is lost before everything is taken care of.

Several years ago the workers at the Armenian SSR Ministry of Health could hardly handle the massive paperwork concerned with applications for consultation with a patient or appointments with a specific physician, or even for a series of consultations with the most experienced physician.

"About four years ago"--said the Armenian SSR Minister of Health, E. Gabriyelian--"we decided in our Republic to experiment with 'open door days'". This novel form of consultative service was totally justified, and now has been fully accepted by the citizenry. Initially the "open door days" were practiced only in a few medical centers of Yerevan; today there are 29 basic clinical, medical-prophylactic centers open to public.

So where is the novelty? Lets start from the fact that eminent scientists, noted physicians become available to everybody--one does not "happen to reach them accidentally", one just comes in to their offices. Every Saturday one can get a consultation on every basic medical specialty. From 11 AM to 2 PM the receptions are made available by professors, assistant professors, clinic directors, chairmen,--all highly specialized professionals. The Minister's order obligated all specialists to take such admissions at least three times a month. All laboratories and functional and x-ray diagnostic services are also open at these times. Usually during the consultations there are individuals also present who work on improvement of their professional status: departmental staff, postgraduate physicians and graduate students of medical institutes.

Now a statistical comment. In the last four years, over 42,000 individuals entered the widely open doors of leading Armenian physicians. Of these, 16,000 individuals came from the countryside. Over 11,000 were hospitalized.

In addition, this new form of medical service made it possible for the starting medical person to check out the puzzling cases and to direct the patients immediately to a consultation with the best specialist.

I was told at the Health Ministry that the initiative taken by Yerevan was picked up by other cities and rayons of the Republic. Admission of the general public on Saturdays was organized everywhere.

Another form of medical service originated in the Republic are the so called "Sunday excursions" of leading physicians into the countryside. In the last year such "Sundays" occurred in Leninakan, Kirovakan, Stapanavansk, Araratsik and Nairiysk rayons of the Republic. The plans for the current year are to expand this service to Kafan, Megri and other more remote areas of Armenia.

The Chairman of the Committee for preparation and implementation of "Sundays", Armenian SSR Deputy Minister of Health U. Pogosyan said:

"The schedule of each trip of our specialists includes meetings with Party and Soviet cadre actives, consultations with professors and assistant professors as well as question and answer sessions. In selected offices a reception room is set up in which the Health Ministry is represented. The people are met by the Minister of the Republic and his representatives. The sale of medical literature, drugs and presentations of popular scientific films on medical subjects are organized. In short, the tactics of "health protective invasion" is developed in a manner which would assure the capture of practically all medical specialties and sanitary education personnel.

One more innovation was reported in the Health Ministry. At this time there are 180 doctors and 800 candidates of medical sciences working in Armenia--hundreds of qualified physicians. Most of them started in a small rural community hospital or ambulatory service. In the cadre department I was shown a list of leading specialists in the Republic, where along with their name, the area was reported where the present professor, assistant professor, department chairman, etc., began their careers. And so the Ministry of Health has introduced a new directive: five days of the year the most experienced specialists of Yerevan work at the sites where they started their medical profession.

This report will end on a statistical note. In the last three years the letters from citizens, asking the staff of the Health Ministry for help, have decreased by a thousand-fold. And conversely, the letters praising the physicians have quadrupled.

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MALIGNANT-NEOPLASM MORBIDITY OF USSR POPULATION DURING THE PERIOD FROM 1970 TO 1980

Leningrad VOPROSY ONKOLOGII in Russian Vol 28, No 10 Oct 82

[Article by N. P. Napalkov, V. M. Merabishvili, F. G. Tserkovnyy and M. N. Prebrazhenskaya]

[Text] Development of oncologic care of the USSR population in the 1970's was defined by the resolution of the USSR Council of Ministers of April 1976 and by the order, issued on the basis of this resolution, of the USSR Ministry of Health No 425 of 29 April 1976. The basic goal was the adoption of measures for an accelerated development of a network of large oncologic dispensaries, the technical reequipping of oncologic institutions with modern diagnostic and treatment apparatus and the training of qualified physician-oncologists at institutes and at advanced training of physicians faculties.

The system for registering patients with malignant neoplasma was improved in the 1970's in many nations. Statistical materials on patients with malignant neoplasma were issued in separate publications in Australia, Brazil, Denmark, Canada, China, Poland, the USSR, the USA, Finland and Switzerland and other nations [1, 11, 1], 15].

Constant attention was given to methodological questions in the activity of population and hospital cancer registers [8, 14]. Methodological recommendations were issued in the USSR for analyzing the activity of the oncologic service [2, 6]. The number of nations where selective investigations of tumor frequency are conducted was expanded.

Table 1. Network of oncologic institutions (all departments) in the USSR and union republics (at end of corresponding year)

	(1) Число онкологических диспансеров		Число онкологических диспансерных отделений (кабинетов) (2) больниц		Число коек для онкологических больных (3)			
			1970 г.	1980 г.	1970 г.	1980 г.	(4) абсолютное число в тыс.	на 100 000 жителей (5) лей
	1	2	3	4	5	6	7	8
СССР (6)	272	249	3202	3509	46,6	56,3	1,9	2,1
РСФСР	132	119	1918	1952	25,4	30,7	1,9	2,2
УССР (8)	56	46	627	656	10,0	10,9	2,1	2,2
БССР	11	11	40	78	1,7	2,3	1,9	2,4
Узбекская ССР (10)	14	17	143	218	1,9	2,7	1,5	1,7
Казахская ССР	17	18	112	181	2,2	2,7	1,7	1,8
Грузинская ССР(12)	7	4	49	82	0,6	1,0	1,3	1,9
Азербайджанская ССР	13	11	44	41	0,9	1,1	1,7	1,7
Литовская ССР(14)	4	3	51	7	0,5	1,0	1,6	2,9
Молдавская ССР	2	1	29	41	0,6	0,5	1,7	1,3
Латвийская ССР(16)	4	4	52	35	0,8	0,8	3,3	3,2
Киргизская ССР	2	3	39	55	0,7	1,0	2,3	2,7
Таджикская ССР(18)	2	3	15	42	0,3	0,3	1,0	0,8
Армянская ССР	3	3	48	58	0,3	0,5	1,2	1,4
Туркменская ССР(20)	3	4	18	52	0,4	0,6	1,8	1,9
Эстонская ССР(21)	3	2	17	11	0,4	0,4	2,9	2,5

Key:

1. Number of oncologic dispensaries	11. Kazakh SSR
2. Number of oncologic-dispensary departments (offices) in hospitals	12. Georgian SSR
3. Number of beds for oncologic patients	13. Azerbaijan SSR
4. absolute number in thousands	14. Lithuanian SSR
5. per 100,000 inhabitants	15. Moldavian SSR
6. USSR	16. Latvian SSR
7. RSFSR	17. Kirghiz SSR
8. UkSSR	18. Tajik SSR
9. BSSR	19. Armenian SSR
10. Uzbek SSR	20. Turkmen SSR
	21. Estonian SSR

Information is presented in Table 1 on the network of oncologic institutions and the number of beds in the union republics.

During the last decade the number of annually-recorded patients with malignant neoplasma in the USSR, increased from 430,200 in 1970 to 544,200 in 1980, or by 26.5%. The size of the contingents of oncologic patients increased twice as rapidly and comprised 2,225,800 people by the end of 1980. The gross parameter of malignant-neoplasm morbidity of the USSR population, at a mean annual rate of increase of 1.58%, reached 205.2°/oooo in 1980. The dynamics of the gross and standardized\* parameters of malignant-tumor morbidity of the USSR population are shown in Fig. 1.

\*In all tables the standardized parameters are calculated for the standard population computed by M. Segi.

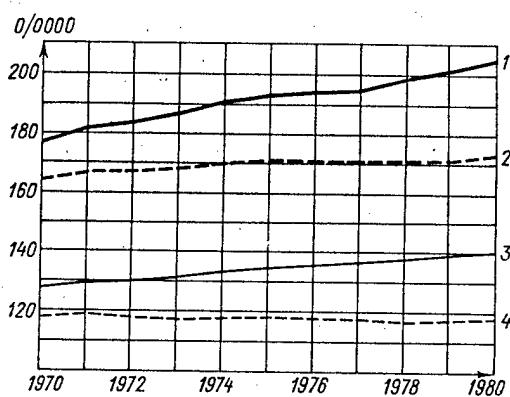


Figure 1. Dynamics of malignant-neoplasm morbidity (an mortality) of USSR population. 1) "gross" morbidity parameter; 2) standardized (M. Segi) morbidity parameter; 3) "gross" mortality parameter; 4) standardized (M. Segi) mortality parameter.

A higher malignant-neoplasm morbidity was noted among city inhabitants throughout the period under examination; moreover, in connection with the continuing urbanization process virtually the entire increase in first-time patients occurred due to the increase in new cases of illnesses among the city population (out of 114,000 cases, the increase in the cities comprised nearly 105,000) (Table 2). According to the data of O. M. Jensen (1980), the malignant-tumor morbidity in Denmark of males in the city was 60% higher and of females 30% than that of the residents of the rural district [12]. The thorough study of A. E. Prisyazhnyuk et al. (1980) of the processes of dynamics of malignant-neoplasm morbidity of the rural population in the Ukraine made it possible to reveal new patterns associated with change in the social and occupational structure of the rural population [7].

Included among the basis patterns in the dynamics of malignant-neoplasm morbidity of the USSR population should be the stable decline over the last 10 years in population morbidity with cancer of the stomach, esophagus, lip and uterine cervix. A considerable increase in the tumor frequency in the population was established with respect to cancer of the rectum, breast, larynx and lungs. An increase in morbidity was also characteristic of malignant neoplasms of the skin and, also, the lymphatic and hematopoietic tissue. In connection with the varying directionality of the dynamics and rate of their increase or decline, a rank redistribution of the relative significances of malignant neoplasms occurred in the overall structure of oncologic morbidity. The first

three places were referable to malignant neoplasia of the stomach, lungs and skin; however, their aggregate relative significance declined from 46.9% in 1970 to 43.6% in 1980. Breast tumors emerged at fourth place in the overall structure of oncologic morbidity, having displaced cancer of the uterine cervix to fifth place. Cancer of the rectum moved from ninth to seventh place, surpassing both cancer of the esophagus and lip.

Since 1976, the overall gross coefficient of malignant-neoplasm morbidity of males has surpassed the parameter for females. In 1980, the malignant-neoplasm morbidity of males was higher than the corresponding gross and standardized parameters of females by 3.5 and 52.4% (Table 3). As a whole for the decade, the increase in the gross and standardized morbidity parameters comprised 21.3 and 9.6% for males and 12.9 and 3.9% for females. The age parameters of malignant-neoplasm morbidity of males and females are presented in Fig. 2.

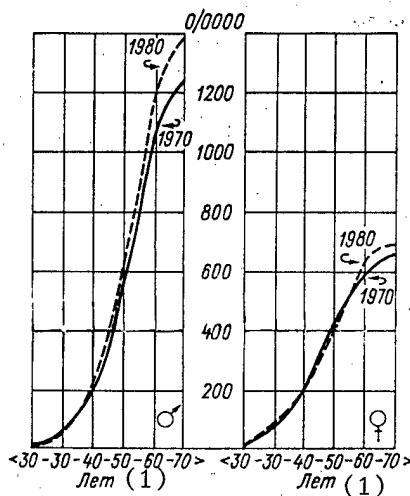


Figure 2. Age-sex parameters of malignant-neoplasm morbidity of USSR population in 1970 and 1980.

Key:  
1. Years

Table 2. Distribution of malignant-neoplasm patients in the USSR with respect to tumor site.

Table 2, continued.

1 Число больных с впервые в жизни установленным диагнозом злокачественного новообразования, учтенных онкологическими учреждениями									
В том числе									
Сельское население									
1970 год	(17)	167 135	1806	7 995	8 516	41 980	4 001	2 444	18 073
Абсолютное число		167 135	1,7	7 995	8,1	39 9	3,8	2,3	17,2
на 100 000 жителей		158,7	1,1	5,1	4,8	25,1	2,4	1,5	10,9
в %		100,0							
1975 год	(17)	175 939	2186	7 471	7 920	39 205	4 971	3 041	22 151
Абсолютное число		175 939	2,2	7,5	8,0	39,4	5,0	3,1	22,2
на 100 000 жителей		176,7	1,2	4,2	4,5	22,3	2,8	1,7	12,6
в %		100,0							
1980 год	(17)	176 191	2733	7 078	7 708	33 429	6 040	3 444	25 576
Абсолютное число		176 191	2,8	7,2	7,8	33,8	6,1	3,5	25,9
на 100 000 жителей		178,4	1,6	4,0	4,4	18,9	3,4	2,0	14,5
в %		100,0							

Key:

1. Number of patients with established malignant-neoplasm diagnosis for first time in life recorded by oncologic institutions
2. All malignant neoplasms
3. Including buccal cavity and throat (without lips)
4. lips
5. esophagus
6. stomach
7. rectum
8. larynx
9. Number of patients with established malignant-neoplasm diagnosis for first time in life recorded by oncologic institutions
10. trachea, bronchi and lung
11. skin
12. breast
13. uterine cervix
14. other organs
15. lymphatic and hematopoietic tissue
16. Entire population
17. Absolute number per 100,000 inhabitants in %
18. City population
19. Rural population

When examining separately the structure of malignant-neoplasm morbidity of males and females, there should be noted the emergence of lung cancer in first place among the male population and of breast cancer in second place among the female population [4, 5]. The maintenance of the existing trends in the dynamics of parameters of breast morbidity will lead to emergence of breast cancer in first place in the oncologic morbidity of the female population as early as in the next two to three years.

An analysis of the dynamics of malignant-neoplasm morbidity of the population of the union republics as a whole is in agreement with mean-union trends. A decline in parameters was noted in only three union republics--Uzbek, Kirghiz and Tajik; moreover, the parameters were extremely low. The greatest increase in malignant-neoplasm morbidity was noted in the Ukrainian SSR (by 29.4%), Latvian SSR (26.3%), Moldavian SSR (25.0%) and Belorussian SSR (22.9%) (Table 4). It should be stressed that special attention was given during the last 10 years to preparative measures for creating and introducing an automated system for the recording and analysis of data using computers in, specifically, these union republics and, also, in the Estonian SSR, which had the highest parameter of population malignant-tumor morbidity.

We shall examine the characteristics of the dynamics of morbidity and mortality from malignant neoplasms of the principal sites among the population of the USSR and union republics (Tables 4, 5, and 6).

Table 3. Age-sex parameters of malignant-neoplasm morbidity of USSR population in 1980

(1)	(2) МСКБ-8 1965 г.	Число больных с впервые в жизни установленным диагнозом злокачественного новообразования, учтенных онкологическими учреждениями на 100 000 жителей соответствующего пола и возраста (в годах)																													
		(3)			(4) Мужчины			(5) Женщины			(8) Всего			(8) до 30			(9) 30—39			(10) 40—49			(11) 50—59			(12) 60—69					
Локализации	(6) до 30	30—39	40—49	50—59	60—69	(7) 70 и старше	(8) Всего	(9) до 30	30—39	40—49	50—59	60—69	(7) 70 и старше	(8) до 30	(9) 30—39	(10) 40—49	(11) 50—59	(12) 60—69	(13) 70 и старше	(14) 70 и старше	(15) 60—69	(16) 70 и старше	(17) 70 и старше	(18) 60—69	(19) 70 и старше	(20) 60—69	(21) 70 и старше	(22) 60—69	(23) 70 и старше		
Все злокачественные новообразования (11)	140—209	11,7	55,4	210,5	598,5	1185,6	1388,3	208,9	225,3	12,9	81,4	203,4	404,0	638,6	697,4	201,9	147,8														
В том числе (12)	141—149	0,2	1,6	6,8	16,1	20,5	17,5	4,5	4,6	0,2	0,9	2,0	3,5	5,2	6,3	1,9	1,4														
губы	140	0,1	2,8	12,7	26,2	45,8	56,2	9,0	9,5	0,0	0,1	1,0	3,0	7,4	12,0	2,2	1,4														
пищевод (15)	150	0,0	0,6	5,9	22,3	48,1	69,9	8,0	8,7	0,0	0,3	2,0	7,3	18,2	29,1	5,1	3,3														
желудка	151	0,5	10,7	47,2	121,1	254,1	311,6	43,6	47,2	0,4	6,7	19,8	49,1	110,7	147,5	30,9	21,0														
прямой кишечник	154	0,2	1,8	5,8	17,3	43,9	58,5	7,0	7,8	0,2	2,1	6,7	16,5	30,7	35,7	8,7	6,1														
гортани	161	0,0	2,0	11,9	30,2	38,1	25,2	7,7	7,8	0,0	0,2	0,5	1,3	1,5	1,4	0,5	0,3														
бронхов, трахея, легкого (19)	162	0,2	6,2	46,7	175,7	328,5	291,0	51,2	55,0	0,1	2,0	5,9	18,5	39,1	45,7	10,3	7,1														
кожи	172	0,6	6,3	19,0	50,8	103,8	158,7	19,5	21,2	0,9	8,5	21,7	45,4	84,4	118,2	26,5	18,5														
молочной железы (21)	173	0,0	0,0	0,2	0,7	1,2	1,7	0,2	0,2	0,8	21,4	55,5	68,8	65,6	48,9	28,0	22,2														
щечки матки	174	0,0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
лимфатической и кроветворной (23)	180	—	4,5	6,1	9,8	20,9	38,1	39,1	9,9	10,4	3,6	5,6	7,3	13,3	20,0	17,1	8,0	6,3													

Key:

1. Sites
2. MSKB-8 [apparently refers to a system for numbering malignancies according to site]
3. Number of patients with established malignant-neoplasm diagnosis for first time in life recorded by oncologic institutions, per 100,000 inhabitants of corresponding sex and age (in years)
4. men
5. women
6. less than 30
7. 30 and older
8. Total
9. typical parameters
10. standardized parameters
11. All malignant neoplasms
12. Including:
13. buccal cavity and throat
14. lip
15. esophagus
16. stomach
17. rectum
18. larynx
19. trachea, bronchi and lung
20. skin
21. breast
22. uterine cervix
23. lymphatic and hematopoietic tissue

Table 4. Malignant-neoplasm morbidity of population of USSR and union republics

(1) Союзные республики	Число больных с впервые в жизни установленным диагнозом злокачественного новообразования, учтенных онкологическими учреждениями (на 100 000 жителей)			
	1970 г.	1975 г.	1979 г.	1980 г.
1	2	3	4	5
(3) Злокачественные новообразования, всего (140—209)				
СССР (4)	177,2	193,7	201,6	205,2
РСФСР	197,9	217,6	227,1	231,3
УССР (6)	184,4	213,5	233,8	238,6
БССР	154,9	178,0	186,4	190,4
Узбекская ССР (8)	82,8	80,1	74,8	73,3
Казахская ССР	157,7	155,3	153,2	163,6
Грузинская ССР (10)	105,1	108,8	109,4	105,7
Азербайджанская ССР	93,6	107,8	107,4	94,6
Литовская ССР (12)	198,6	224,8	239,9	250,9
Молдавская ССР	119,2	137,0	148,4	149,0
Латвийская ССР (14)	244,1	240,7	230,3	252,7
Киргизская ССР	124,5	116,6	112,7	115,1
Таджикская ССР (16)	73,5	68,3	67,2	71,6
Армянская ССР	109,6	116,3	123,1	125,1
Туркменская ССР (18)	100,7	105,1	101,1	106,7
Эстонская ССР	255,5	270,3	280,0	271,4
(20) Злокачественные новообразования губы (140)				
СССР	6,1	5,7	5,4	5,4
РСФСР (5)	6,7	6,4	6,2	6,0
УССР	8,0	7,4	7,9	7,3
БССР (7)	4,3	3,9	3,9	3,4
Узбекская ССР	1,6	1,4	1,3	1,2
Казахская ССР (9)	5,1	4,9	4,0	4,7
Грузинская ССР	2,4	2,2	2,5	2,2
Азербайджанская ССР (11)	2,0	2,4	1,3	1,8
Литовская ССР	5,9	4,1	3,7	4,2
Молдавская ССР (13)	4,3	5,0	5,2	5,4
Латвийская ССР	4,5	4,0	3,4	3,5
Киргизская ССР (15)	3,4	3,4	2,5	3,0
Таджикская ССР	2,6	1,5	1,5	1,3
Армянская ССР (17)	2,2	2,6	2,5	2,2
Туркменская ССР	2,1	1,5	1,8	1,2
Эстонская ССР (19)	3,5	3,1	3,1	2,0
(21) Злокачественные новообразования пищевода (150)				
СССР (4)	7,3	6,7	6,4	6,4
РСФСР (6)	6,9	6,1	5,9	5,8
УССР	2,6	2,7	2,9	3,1
БССР	2,3	2,1	2,0	2,2
Узбекская ССР (8)	16,0	14,1	12,9	11,9
Казахская ССР	25,7	22,3	19,3	20,3
Грузинская ССР (10)	2,4	1,7	2,2	1,5
Азербайджанская ССР	9,3	8,8	7,6	6,9
Литовская ССР (12)	1,8	2,2	2,0	2,1
Молдавская ССР	1,7	1,1	1,4	1,3
Латвийская ССР (14)	2,4	2,7	1,7	2,8
Киргизская ССР	8,1	7,6	6,4	6,6
Таджикская ССР (16)	7,8	7,5	6,5	5,9
Армянская ССР	3,8	3,4	3,0	2,7
Туркменская ССР (18)	26,6	31,6	30,3	30,5
Эстонская ССР	2,6	2,0	2,5	2,3

Table 4, continued.

(1) Союзные республики	Число больных с впервые в жизни установленным диагнозом злокачественного новообразования, учтенных онкологическими учреждениями (на 100 000 жителей)			
	1970 г.	1975 г.	1979 г.	1980 г.
1	2	3	4	5
<b>(22) Злокачественные новообразования желудка (151)</b>				
СССР(4)	42,3	41,0	37,6	36,9
РСФСР	52,6	50,9	46,5	45,5
УССР (6)	34,8	37,1	36,2	35,5
БССР	46,2	45,6	42,0	40,2
Узбекская ССР(8)	13,7	12,2	10,8	10,6
Казахская ССР	32,8	29,1	24,9	26,7
Грузинская ССР (10)	15,6	15,2	10,9	11,0
Азербайджанская ССР	19,5	20,4	20,1	16,7
Литовская ССР(12)	43,0	41,0	41,2	39,4
Молдавская ССР	15,5	17,5	17,0	17,6
Латвийская ССР(14)	46,5	38,6	34,5	36,0
Киргизская ССР	28,2	24,0	21,8	21,5
Таджикская ССР(16)	13,0	12,2	9,7	11,2
Армянская ССР	19,0	17,2	18,3	17,1
Туркменская ССР(18)	18,2	17,5	13,0	14,8
Эстонская ССР	50,7	43,4	42,7	39,7
<b>(23) Злокачественные новообразования прямой кишки (154)</b>				
СССР	4,8	6,5	7,7	8,0
РСФСР (5)	5,4	7,3	8,9	9,0
УССР	5,5	7,9	9,5	9,9
БССР (7)	4,7	7,1	7,9	8,7
Узбекская ССР	1,5	1,7	1,7	1,8
Казахская ССР (9)	2,7	3,7	4,4	4,6
Грузинская ССР	2,8	3,3	3,2	2,9
Азербайджанская ССР (11)	1,8	3,0	2,9	3,0
Литовская ССР	8,2	8,6	11,1	12,5
Молдавская ССР (13)	3,0	4,9	6,7	6,4
Латвийская ССР	8,3	9,0	7,5	8,5
Киргизская ССР (15)	2,2	3,1	3,2	3,4
Таджикская ССР	1,6	1,5	1,5	1,8
Армянская ССР(17)	2,8	2,6	3,8	3,9
Туркменская ССР	2,6	1,2	1,7	2,0
Эстонская ССР(19)	9,5	11,5	12,9	11,1
<b>(24) Злокачественные новообразования горлани (161)</b>				
СССР(4)	2,8	3,4	3,7	3,9
РСФСР	3,2	3,9	4,3	4,4
УССР (6)	2,6	3,4	3,8	4,0
БССР	1,9	3,2	3,8	3,6
Узбекская ССР (8)	1,4	1,3	1,1	1,0
Казахская ССР	2,2	2,6	2,4	2,8
Грузинская ССР(10)	3,8	3,5	4,6	3,5
Азербайджанская ССР	3,2	3,6	3,3	3,1
Литовская ССР (12)	3,3	4,8	5,4	4,6
Молдавская ССР	2,2	2,3	2,2	2,6
Латвийская ССР(14)	2,7	3,8	4,2	4,3
Киргизская ССР	1,6	1,6	1,5	1,6
Таджикская ССР(16)	1,1	1,2	1,1	1,3
Армянская ССР	3,3	4,0	4,2	3,9
Туркменская ССР(18)	1,8	1,3	2,0	2,3
Эстонская ССР	2,9	3,3	4,1	4,2

Table 4, continued.

(1) Союзные республики	Число больных с впервые в жизни установленным диагнозом злокачественного новообразования, учтенных онкологическими учреждениями (на 100 000 жителей)			
	1970 г.	1975 г.	1979 г.	1980 г.
	2	3	4	5
<b>(25) злокачественные новообразования трахеи, бронхов и легкого (162)</b>				
СССР (4)	20,8	25,2	28,7	29,4
РСФСР	23,9	29,1	33,5	34,2
УССР (6)	23,0	29,5	34,6	35,7
БССР	14,9	19,3	21,6	21,9
Узбекская ССР (8)	5,7	6,7	6,5	6,4
Казахская ССР	15,2	18,2	20,9	21,7
Грузинская ССР (10)	11,2	11,4	13,3	14,9
Азербайджанская ССР	10,1	11,0	13,0	11,3
Литовская ССР (12)	22,2	31,2	33,9	35,7
Молдавская ССР	13,8	16,7	18,4	20,0
Латвийская ССР (14)	32,1	31,4	30,9	31,7
Киргизская ССР	9,8	11,9	13,3	12,3
Таджикская ССР (16)	5,0	5,9	5,7	5,8
Армянская ССР	12,2	12,2	14,8	15,1
Туркменская ССР (18)	6,3	6,6	7,0	8,0
Эстонская ССР	30,4	37,5	38,0	39,2
<b>(26) злокачественные новообразования кожи (172, 173)</b>				
СССР	20,1	22,3	23,0	23,3
РСФСР (5)	20,8	24,2	24,6	25,1
УССР	26,5	28,3	29,9	30,0
БССР (7)	15,3	20,5	22,0	21,7
Узбекская ССР	9,4	9,1	8,4	8,1
Казахская ССР (9)	15,3	16,3	16,8	18,0
Грузинская ССР	11,4	10,8	13,9	13,8
Азербайджанская ССР (11)	8,8	11,1	10,3	8,5
Литовская ССР	18,7	20,5	23,0	23,7
Молдавская ССР (13)	16,7	17,3	22,3	20,2
Латвийская ССР	25,9	26,6	25,1	28,2
Киргизская ССР (15)	17,6	16,1	14,8	16,4
Таджикская ССР	13,4	10,7	13,5	13,7
Армянская ССР (17)	9,6	11,2	12,1	11,8
Туркменская ССР	9,0	7,1	8,6	9,9
Эстонская ССР (19)	26,2	32,6	31,1	30,5
<b>(27) злокачественные новообразования молочной железы (174)</b>				
СССР (4)	10,1	12,5	14,4	15,1
РСФСР	10,7	13,7	15,9	16,6
УССР (6)	12,3	15,1	17,4	18,4
БССР	8,6	11,4	13,5	14,0
Узбекская ССР (8)	3,5	4,1	4,5	4,5
Казахская ССР	6,4	7,4	8,4	9,4
Грузинская ССР (10)	11,7	14,0	15,5	14,8
Азербайджанская ССР	6,2	6,8	8,5	7,0
Литовская ССР (12)	13,4	16,1	19,2	19,7
Молдавская ССР	7,1	10,8	11,8	13,0
Латвийская ССР (14)	18,7	8,4	19,9	23,0
Киргизская ССР	5,9	15,5	7,0	7,2
Таджикская ССР (16)	2,8	3,1	3,8	4,1
Армянская ССР	8,1	8,6	12,5	12,4
Туркменская ССР (18)	3,7	3,6	3,8	3,5
Эстонская ССР	19,5	22,7	23,6	23,4

Table 4, continued.

(1) Союзные республики	Число больных с впервые в жизни установленным диагнозом злокачественного новообразования, учтенных (2) онкологическими учреждениями (на 100 000 жителей)			
	1970 г.	1975 г.	1979 г.	1980 г.
	1	2	3	4
<b>(28) Злокачественные новообразования шейки матки (180)</b>				
СССР(4)	14,0	12,5	11,4	11,4
РСФСР	15,7	14,2	12,7	12,6
УССР(6)	15,3	13,9	13,4	13,7
БССР	9,5	9,1	10,2	9,9
Узбекская ССР(8)	5,3	4,7	4,1	4,0
Казахская ССР	12,7	10,2	9,5	9,1
Грузинская ССР(10)	8,2	7,7	7,2	6,3
Азербайджанская ССР	6,0	5,0	4,9	4,6
Литовская ССР(12)	13,5	11,3	12,4	11,5
Молдавская ССР	14,7	12,6	11,9	11,6
Латвийская ССР(14)	16,0	15,6	11,9	11,8
Киргизская ССР	12,4	10,2	8,4	7,3
Таджикская ССР(16)	4,5	3,6	3,4	3,5
Армянская ССР	7,8	8,4	8,8	7,9
Туркменская ССР(18)	8,4	7,6	4,0	4,8
Эстонская ССР	12,7	11,9	10,8	11,4
<b>(29) Злокачественные новообразования лимфатической и кроветворной ткани (200—209)</b>				
СССР	7,3	8,6	8,8	8,9
РСФСР(5)	7,6	8,7	9,2	9,3
УССР	8,0	11,0	11,2	11,0
БССР(7)	10,0	10,4	9,7	10,8
Узбекская ССР	3,7	3,3	3,4	3,3
Казахская ССР(9)	4,7	5,1	4,4	4,9
Грузинская ССР	5,8	5,0	4,7	4,6
Азербайджанская ССР(11)	3,8	6,1	7,1	4,3
Литовская ССР	9,0	15,3	13,6	15,7
Молдавская ССР(13)	8,3	9,1	9,2	9,6
Латвийская ССР	13,2	13,6	12,8	15,2
Киргизская ССР(15)	4,8	4,8	5,0	5,0
Таджикская ССР	2,3	3,8	2,6	3,0
Армянская ССР(17)	10,4	9,9	10,8	10,7
Туркменская ССР	4,3	4,2	5,1	5,0
Эстонская ССР(19)	16,6	17,7	18,6	15,6

Key:

1. Union republics
2. Number of patients with established malignant-neoplasm diagnosis for first time in life recorded by oncologic institutions (per 100,000 inhabitants)
3. Malignant neoplasms, total
4. USSR
5. RSFSR
6. UkrSSR
7. BSSR
8. Uzbek SSR
9. Kazakh SSR
10. Georgian SSR
11. Azerbaidzhan SSR
12. Lithuanian SSR
13. Moldavian SSR
14. Latvian SSR
15. Kirghiz SSR
16. Tajik SSR
17. Armenian SSR
18. Turkmen SSR
19. Estonian SSR
20. Malignant neoplasms of lip
21. Malignant neoplasms of esophagus
22. Malignant neoplasms of stomach

Table 4, continued.

Key:

23. Malignant neoplasms of rectum	27. Malignant neoplasms of breast
24. Malignant neoplasms of larynx	28. Malignant neoplasms of uterine
25. Malignant neoplasms of trachea, bronchi and lung	cervix
26. Malignant neoplasms of skin	29. Malignant neoplasms of lymphatic and hematopoietic tissue

Table 5. Age-sex parameters of malignant-neoplasm morbidity of population of USSR and union republics in 1980

	(1) Число больных с впервые в жизни установленным диагнозом злокачественного новообразования, учтенных онкологическими учреждениями, на 100000 жителей, соответствующего пола и возраста										(2) мужчины										(3) женщины																
	(4) до 30					(5) 30—39					(6) 40—49					(7) 50—59					(8) 60—69					(9) 70 и старше					(10) 70 и старше						
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35			
(9) Всё злокачественные новообразования (140—209)																																					
СССР (10)	11,7	55,4	210,5	598,5	1185,6	1388,3	208,9	225,3	12,9	81,4	203,4	404,0	638,6	697,4	201,9	147,8																					
РСФСР	13,6	58,5	228,9	648,6	1277,9	1583,4	235,5	227,1	14,9	84,9	211,3	414,1	663,1	756,7	227,6	155,4																					
УССР (12)	12,1	44,5	214,9	608,5	1164,5	1315,1	249,6	223,8	14,9	86,8	213,8	424,6	620,7	633,0	229,2	149,5																					
БССР	7,1	35,9	116,1	497,7	1056,8	1156,9	195,5	192,3	13,3	69,7	177,5	362,3	574,9	574,0	185,9	130,4																					
Узбекская ССР (14)	9,0	53,7	225,9	676,9	1342,9	1511,4	166,5	247,4	10,1	70,5	197,3	451,1	746,8	808,6	160,9	159,7																					
Казахская ССР	7,0	27,6	98,1	29,6	554,8	615,5	106,4	106,6	7,7	52,1	144,3	240,0	321,7	299,9	105,1	82,7																					
Грузинская ССР (16)	5,2	53,8	146,0	369,1	903,0	1156,1	101,4	165,7	4,6	69,8	149,0	251,5	477,9	468,2	88,2	101,7																					
Азербайджанская ССР (17)	12,0	53,6	202,2	594,4	1151,9	1646,3	262,2	232,6	18,2	100,6	244,7	409,6	662,5	921,1	240,8	169,6																					
Литовская ССР (18)	11,0	51,8	155,0	428,1	792,8	903,1	147,5	157,5	9,7	74,9	197,7	368,9	541,0	550,1	150,2	129,0																					
Молдавская ССР (19)	13,9	49,3	176,0	547,5	1115,3	1430,8	250,5	214,4	15,7	85,8	220,3	449,0	652,9	778,5	160,3																						
Латвийская ССР (20)	8,8	51,4	165,7	469,7	1009,4	1031,8	115,8	180,2	8,0	83,6	177,9	360,6	603,1	642,0	114,5	127,1																					
Киргизская ССР (22)	7,9	43,5	124,1	332,1	617,2	688,4	73,1	122,3	5,8	44,3	151,4	277,9	450,6	400,2	70,2	97,1																					
Армянская ССР	15,7	48,5	149,3	415,7	1153,8	986,8	129,9	183,3	13,6	84,3	197,2	339,4	610,5	468,8	120,4	130,6																					
Туркменская ССР (24)	9,1	45,1	178,4	489,2	1009,4	1253,7	105,6	192,1	8,0	52,5	163,1	413,8	725,6	778,3	107,6	146,1																					
Эстонская ССР	12,6	47,2	239,9	562,9	1283,9	1749,7	274,3	246,4	12,4	94,3	203,7	463,0	708,8	911,7	269,0	167,9																					
(26) Половинный возраст (141—149)																																					
СССР	0,2	1,6	6,8	16,1	20,5	17,5	4,5	4,6	0,2	0,9	2,0	3,5	5,2	6,3	1,4																						
РСФСР	0,2	1,7	6,9	16,8	21,3	19,0	4,9	4,8	0,2	0,8	1,8	3,3	5,0	6,5	1,3																						
УССР	0,3	1,6	8,2	17,0	19,5	14,8	5,4	4,7	0,2	1,0	2,0	3,5	4,6	4,9	1,3																						
БССР (13)	0,1	0,7	5,9	13,8	21,3	13,7	4,1	4,0	0,0	1,4	1,8	2,8	4,7	0,2	1,9	2,6	2,8	3,1	5,6	1,5	1,1																
Узбекская ССР	0,1	1,7	7,8	12,9	22,5	22,9	2,8		0,2	1,9	2,6	7,3	9,6	9,7																							

Key:

1. Number of patients with established malignant-neoplasm diagnosis for first time in life recorded by oncologic institutions, per 100,000 inhabitants of corresponding sex and age
2. men
3. women
4. less than 30
5. 70 and older
6. total
7. typical parameters
8. standardized parameters
9. All malignant neoplasms
10. USSR
11. RSFSR
12. UkrSSR
13. BSSR
14. Uzbek SSR
15. Kazakh SSR
16. Georgian SSR
17. Azerbaijani SSR
18. Lithuanian SSR
19. Moldavian SSR
20. Latvian SSR
21. Kirghiz SSR
22. Tajik SSR
23. Armenian SSR
24. Turkmen SSR
25. Estonian SSR
26. Buccal cavity

Table 5, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Казахская ССР (7)	0,2	1,1	5,2	13,9	21,4	12,4	2,8	4,0	0,5	1,3	1,9	4,2	7,0	9,2	1,9	1,9
Грузинская ССР (0,4)	0,0	3,8	9,8	16,7	15,6	3,3	0,1	0,3	1,3	1,9	3,8	3,0	1,0	0,8	0,8	0,8
Азербайджанская (9)	0,3	2,8	3,7	8,4	17,1	20,0	2,4	3,6	0,3	1,8	4,5	4,1	10,8	1,3	1,7	2,0
ССР (1)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Литовская ССР (10)	0,2	1,8	6,8	12,3	17,8	18,1	4,5	4,1	0,3	0,8	4,4	2,2	5,7	7,7	2,3	1,7
Молдавская ССР (0,1)	2,1	6,9	16,8	15,6	18,5	4,3	4,4	0,4	0,3	1,1	1,6	4,6	4,3	1,1	1,1	1,0
Латвийская ССР (12)	0,7	1,8	6,3	17,0	16,8	17,7	5,4	4,7	0,1	0,0	0,0	3,8	8,8	7,3	2,2	1,3
Киргизская ССР (0,1)	1,8	3,3	14,6	16,0	15,3	2,5	3,6	0,0	0,0	1,6	6,2	3,2	6,5	1,1	1,1	1,2
Таджикская ССР (14)	—	1,8	2,2	14,1	10,1	7,8	1,6	2,7	0,1	2,5	2,3	6,8	9,0	10,0	1,6	2,3
Армянская ССР (0,0)	2,0	1,6	7,2	22,8	19,3	2,2	3,3	0,4	0,0	3,6	2,1	6,8	5,3	1,4	1,4	1,5
Туркменская ССР (16)	0,1	1,5	8,0	22,5	22,0	38,2	3,6	6,2	0,1	0,8	5,7	10,0	3,2	16,9	2,0	2,7
Эстонская ССР (0,2)	1,0	9,0	20,3	26,4	14,4	6,1	5,4	1,8	1,9	1,8	2,8	8,3	8,1	2,5	2,5	1,6
(1) Губы (140)																
СССР (2)	0,1	2,8	12,7	26,2	45,8	56,2	9,0	9,5	—	—	0,1	1,0	3,0	7,4	12,0	1,4
РСФСР (4)	0,2	2,7	13,7	28,6	50,1	63,8	10,2	10,5	—	—	0,2	1,1	3,8	12,5	2,4	2,2
УССР (4)	0,1	4,3	14,9	29,0	52,7	66,1	12,5	11,1	—	—	0,2	1,3	8,8	14,1	2,9	1,4
БССР (6)	—	1,0	6,7	18,2	23,1	38,9	6,0	5,6	—	—	0,1	1,5	2,8	8,2	1,2	0,7
Узбекская ССР (6)	0,1	1,6	4,2	11,4	15,5	15,1	2,0	3,4	—	—	0,8	2,0	3,8	4,5	0,5	0,7
Казахская ССР (0,2)	0,2	4,8	16,2	30,8	44,7	55,9	7,6	10,6	—	—	0,1	1,2	5,3	9,6	14,9	1,9
Грузинская ССР (8)	—	1,1	5,5	8,7	19,3	27,4	4,0	3,9	—	—	0,5	0,9	3,3	2,5	0,6	0,5
Азербайджанская ССР (—)	—	1,6	6,7	13,8	18,4	26,7	3,0	4,5	—	—	1,1	1,2	3,6	5,2	0,6	0,7
Литовская ССР (10)	—	—	8,7	17,8	26,1	45,3	7,1	6,2	0,1	0,0	0,4	1,8	4,3	10,1	1,5	1,0
Молдавская ССР (1,2)	0,1	3,0	19,4	34,2	44,9	44,7	10,1	10,5	—	—	0,3	1,5	3,3	3,9	6,9	1,2
Латвийская ССР (0,1)	0,6	4,0	9,7	29,4	42,8	6,1	5,1	7,7	—	—	0,5	2,4	2,4	9,3	1,3	0,6
Киргизская ССР (14)	0,1	1,2	9,0	26,0	44,0	30,6	5,0	19,6	1,9	3,3	—	1,0	3,0	8,6	7,6	1,1
Таджикская ССР (—)	0,6	5,7	8,8	14,1	19,1	31,9	34,4	3,0	4,6	—	1,2	2,1	3,5	5,4	8,6	0,9
Армянская ССР (—)	1,3	3,2	6,4	11,2	8,2	17,3	1,9	3,2	—	—	1,6	2,0	3,2	2,1	11,9	1,6
Туркменская ССР (16)	—	0,7	7,2	11,2	8,2	17,3	4,2	3,8	—	—	—	—	—	—	0,4	0,7
Эстонская ССР (—)	—	—	4,0	6,7	26,4	26,0	4,2	—	—	—	—	—	—	—	2,3	0,2
(18) Пищевода (150)																
СССР (3)	—	0,6	5,9	22,3	48,1	69,9	8,0	8,7	—	—	0,3	2,0	7,3	18,2	29,2	5,1
РСФСР (3)	—	0,4	4,5	19,9	44,6	69,9	7,4	8,1	—	—	0,8	4,3	13,9	29,2	4,5	3,3
УССР (5)	—	0,3	14,4	23,5	27,9	5,0	4,4	3,4	—	—	0,3	1,6	3,8	8,7	1,5	2,6
БССР (5)	—	0,1	2,0	8,6	21,3	3,5	—	—	—	—	0,2	1,2	3,8	6,5	1,1	0,8
?																
1. Lip	1. Kirghiz SSR	13. Kirghiz SSR	8. Georgian SSR	9. Azerbaijani SSR	14. Tajik SSR	15. Armenian SSR	16. Turkmen SSR	17. Estonian SSR	18. Esophagus	—	—	—	—	—	—	—

Key:

1. Lip
2. USSR
3. RSFSR
4. UkrSSR
5. BSSR
6. Uzbek SSR
7. Kazakh SSR
8. Georgian SSR
9. Azerbaijan SSR
10. Lithuanian SSR
11. Moldavian SSR
12. Latvian SSR
13. Kirghiz SSR
14. Tajik SSR
15. Armenian SSR
16. Turkmen SSR
17. Estonian SSR
18. Esophagus

Table 5, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Узбекская ССР (6)	—	2,5	18,0	56,3	147,8	183,1	13,6	24,5	—	2,7	13,8	38,8	73,1	10,3	13,4	
Казахская ССР	—	2,3	19,2	79,5	176,7	274,1	20,5	32,3	—	1,2	9,6	48,2	128,2	20,1	19,5	
Грузинская ССР (8)	—	0,0	1,7	3,2	14,9	12,7	1,8	1,9	—	0,3	0,8	1,6	7,1	1,3	1,0	
Азербайджанская ССР	—	3,2	11,0	23,7	81,6	96,2	7,6	13,0	0,1	1,1	6,4	14,0	36,9	6,2	6,8	
Литовская ССР (10)	0,1	0,0	1,8	8,6	16,6	22,1	3,4	3,0	—	—	0,4	1,8	0,0	7,7	0,9	
Молдавская ССР	—	0,4	4,3	4,9	8,7	9,2	1,8	1,9	—	—	0,4	0,4	3,9	8,7	0,8	
Латвийская ССР (12)	—	0,6	4,0	11,3	21,0	20,6	4,3	3,8	—	—	0,5	1,0	2,4	9,9	1,5	
Киргизская ССР	—	—	9,6	33,3	58,0	83,2	7,1	11,3	—	—	0,6	3,8	18,7	30,1	6,1	
Таджикская ССР (14)	—	0,6	10,9	36,3	87,0	84,3	7,5	13,6	0,1	0,6	10,9	25,0	20,6	25,8	6,3	
Армянская ССР	—	0,6	2,1	12,9	43,3	38,7	3,9	5,9	—	—	4,8	4,9	8,2	17,3	4,4	
Туркменская ССР (16)	0,1	0,6	4,7	35,5	142,6	365,8	486,2	31,0	61,0	—	—	4,8	104,7	244,0	29,9	
Эстонская ССР (17)	—	—	4,0	16,8	4,0	3,5	28,9	3,5	3,1	0,3	0,9	—	—	10,4	41,3	

## (1) Желудка (151)

СССР (2)	0,5	10,7	47,2	121,1	254,1	311,6	43,6	47,2	0,4	6,7	19,8	49,1	110,7	147,5	30,9
РСФСР	0,8	12,5	56,2	14,0	290,0	385,6	53,0	55,8	0,6	7,5	22,9	56,0	127,8	178,4	21,0
УССР (4)	0,4	9,6	40,7	107,1	217,2	243,0	44,6	39,8	0,4	6,3	18,0	41,2	89,3	101,7	24,6
БССР	0,4	9,2	49,9	120,9	271,6	296,2	48,5	47,7	0,6	5,8	19,6	52,3	124,1	134,2	16,8
Узбекская ССР (6)	0,4	4,6	16,4	60,2	137,5	150,9	12,8	23,0	0,1	4,7	10,2	17,5	49,9	112,9	69,4
Казахская ССР	0,3	11,0	44,1	115,5	275,4	360,0	32,4	49,6	0,3	5,5	17,5	49,9	112,9	147,0	21,3
Грузинская ССР (8)	—	1,9	13,5	40,6	69,4	91,1	13,8	13,7	—	1,6	9,2	14,7	32,8	37,4	8,5
Азербайджанская ССР	0,2	8,0	23,3	71,6	181,6	336,8	21,3	35,9	—	5,2	10,4	26,0	65,9	120,1	12,3
Литовская ССР (10)	0,6	10,8	44,5	98,4	211,6	320,2	48,4	42,6	0,6	10,6	15,8	47,5	90,7	159,7	31,3
Молдавская ССР	0,4	5,6	21,2	67,9	150,3	143,5	23,2	25,0	0,1	4,3	9,0	21,8	56,6	77,4	10,5
Латвийская ССР (12)	0,7	7,8	39,9	85,9	184,9	230,3	41,4	35,2	0,7	9,1	18,8	51,2	71,9	125,8	31,5
Киргизская ССР	0,1	9,4	42,4	98,4	266,3	315,4	27,9	45,1	0,2	6,9	15,3	46,7	95,6	90,0	15,4
Таджикская ССР (14)	0,3	10,2	21,8	73,5	155,8	156,9	15,3	27,1	0,1	6,4	14,4	19,7	50,2	60,2	16,8
Армянская ССР	0,6	7,5	18,0	59,1	246,2	202,1	21,5	32,7	0,3	3,8	14,7	37,2	87,6	12,9	14,2
Туркменская ССР (16)	—	7,1	22,6	76,3	181,5	239,6	16,5	31,9	0,4	3,2	12,2	42,2	105,7	127,2	13,1
Эстонская ССР	—	10,2	46,3	93,8	238,4	286,3	47,1	42,3	0,3	3,9	11,0	37,6	97,0	161,4	18,2

Key:

1. Stomach
2. USSR
3. RSFSR
4. UKSSR
5. BSSR
6. Uzbek SSR
7. Kazakh SSR
8. Georgian SSR
9. Azerbaijani SSR
10. Lithuanian SSR
11. Moldavian SSR
12. Latvian SSR
13. Kirghiz SSR
14. Tajik SSR
15. Armenian SSR
16. Turkmen SSR
17. Estonian SSR

Table 5, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
(1) П р я м о й к и ш к и (154)																
CCCP (2)	0,2	5,8	17,3	43,9	58,5	7,1	7,8	0,2	2,1	6,7	16,5	30,7	35,7	8,8	6,1	6,6
РСФСР	0,2	6,3	18,2	45,1	65,1	7,7	8,3	0,2	2,6	7,6	17,5	32,8	39,1	10,2	6,6	6,3
УССР (4)	—	1,4	5,5	19,3	51,3	61,0	9,2	8,3	0,2	1,7	6,6	18,5	32,7	35,2	10,4	5,9
БССР	0,2	2,3	4,2	18,0	45,8	67,5	8,3	8,2	0,2	1,2	5,9	15,8	29,6	38,6	9,1	2,1
Узбекская ССР (6)	0,3	1,6	3,8	5,7	19,3	2,0	3,3	0,1	1,5	3,4	10,8	7,6	13,1	27,7	5,0	5,0
Грузинская ССР (8)	0,2	0,7	1,4	7,2	15,6	40,6	4,2	6,1	0,2	1,6	6,2	13,1	27,7	23,6	5,0	5,0
Азербайджанская ССР	0,1	1,6	3,4	2,6	9,4	18,4	11,7	2,9	0,1	2,7	3,5	5,3	10,0	10,2	3,0	2,4
Литовская ССР (10)	0,1	2,7	8,2	22,1	59,4	106,7	13,4	11,6	0,2	0,8	6,0	13,4	39,6	64,9	11,7	7,3
Молдавская ССР (12)	—	2,6	4,7	17,9	32,2	54,0	6,2	6,8	0,0	1,9	7,1	19,4	28,6	22,6	6,6	5,6
Латвийская ССР (12)	—	1,2	4,6	16,2	50,4	66,4	9,5	8,1	0,1	1,7	3,1	11,9	21,8	30,6	7,7	4,4
Киргизская ССР (14)	0,2	0,6	5,0	15,4	26,0	35,0	3,4	5,3	—	1,2	5,4	13,1	15,0	16,4	3,3	3,6
Таджикская ССР (14)	0,4	0,0	2,2	5,3	12,1	13,7	1,5	2,3	0,2	1,9	4,6	9,1	9,0	14,3	2,1	2,9
Армянская ССР	0,2	2,7	6,5	12,9	45,6	21,5	4,2	6,2	0,3	1,2	2,6	14,7	24,6	14,6	3,7	4,1
Туркменская ССР (16)	0,2	0,0	3,2	0,0	0,0	34,7	1,2	2,0	0,1	1,6	2,4	14,0	16,2	25,4	2,9	3,9
Эстонская ССР	0,2	3,0	7,0	20,3	52,9	63,6	10,0	9,0	—	0,9	10,0	19,2	26,3	52,2	12,1	6,9
(18) Г о р т а н и (161)																
CCCP	11,9	30,2	38,1	25,2	7,7	7,8	—	—	0,2	0,5	1,3	1,5	1,4	0,5	0,3	
РСФСР (3)	—	2,2	13,0	33,4	41,3	30,8	8,9	8,7	—	0,3	0,6	1,5	1,4	1,4	0,6	
УССР	—	2,6	11,8	28,8	34,4	20,1	8,5	7,3	—	0,3	0,3	0,6	0,4	0,6	0,4	
БССР (5)	—	1,2	12,3	29,1	33,3	15,6	7,4	7,0	—	0,1	0,1	0,3	2,8	1,0	0,3	
Узбекская ССР	—	0,4	5,7	8,4	11,8	10,0	1,5	2,6	—	0,3	0,7	2,0	3,2	3,0	0,6	
Казахская ССР (7)	—	0,8	12,9	28,5	39,9	20,3	5,4	7,6	—	0,2	0,4	1,0	1,8	1,9	0,3	
Грузинская ССР	—	0,7	7,9	27,6	34,2	25,4	6,9	6,7	—	0,3	0,8	0,3	2,0	2,0	0,4	
Азербайджанская (9)	—	3,6	6,1	26,2	61,8	32,0	5,2	8,8	—	0,7	0,8	3,7	7,9	7,2	1,3	
Литовская ССР	—	1,8	11,4	38,7	32,0	29,2	9,1	8,3	0,1	0,8	0,0	0,9	2,1	1,1	0,5	
Молдавская ССР (11)	—	0,8	5,1	21,2	32,2	10,8	4,9	5,1	—	—	0,3	0,8	3,9	1,7	0,4	
Латвийская ССР (13)	0,7	1,8	9,8	27,5	39,2	22,1	8,7	7,6	—	—	0,5	1,0	1,6	2,6	0,3	
Киргизская ССР (13)	—	0,6	5,0	13,8	30,0	28,4	3,1	5,0	—	—	1,0	0,0	2,1	1,0	0,2	
Таджикская ССР (15)	0,1	2,7	7,4	13,2	20,1	11,7	2,4	4,0	—	—	0,6	0,0	2,5	2,8	0,4	
Армянская ССР	—	0,7	12,5	24,3	63,8	38,7	6,8	9,7	—	—	0,0	1,5	3,5	8,2	5,3	
Туркменская ССР	—	13,7	22,5	38,5	27,7	4,1	7,3	7,7	—	—	0,0	1,6	4,0	1,6	0,5	
Эстонская ССР (17)	—	0,0	14,1	27,1	38,5	28,9	—	—	—	—	—	—	0,9	2,7	0,3	

Key:

- 1. Rectum
- 2. USSR
- 3. RSFSR
- 4. UkrSSR
- 5. BSSR
- 6. Uzbek SSR
- 7. Kazakh SSR
- 8. Georgian SSR
- 9. Azerbaijani SSR
- 10. Lithuanian SSR
- 11. Moldavian SSR
- 12. Latvian SSR
- 13. Kirghiz SSR
- 14. Tajik SSR
- 15. Armenian SSR
- 16. Turkmen SSR
- 17. Estonian SSR
- 18. Larynx

Table 5, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
(1) Трахея, бронхи и легкого (162)																
(18) Кожи (172, 173)																
СССР (2)	0,2	6,2	46,7	175,7	398,5	291,0	51,2	55,0	0,1	2,1	5,9	18,5	39,1	45,7	10,3	7,1
РСФСР	0,3	6,5	52,5	196,9	373,0	355,1	60,6	63,2	0,1	2,1	6,2	18,6	39,6	49,3	11,6	7,3
УССР (4)	0,3	7,0	49,2	179,8	326,7	285,7	62,1	55,2	0,2	2,3	6,7	21,7	45,0	48,6	13,5	8,0
БССР	0,2	4,1	29,9	125,7	229,8	215,4	39,6	38,9	0,3	1,2	2,6	10,7	22,7	28,9	6,5	4,2
Узбекская ССР (6)	0,2	2,5	12,7	61,1	101,5	79,8	9,5	17,1	—	1,3	4,4	12,2	25,1	44,8	7,7	3,5
Казахская ССР (7)	0,2	7,0	50,7	191,8	322,7	243,0	36,8	54,6	0,1	1,8	6,2	20,1	45,5	44,8	7,7	4,5
Грузинская ССР (8)	0,1	2,6	21,7	84,7	153,0	137,2	25,9	26,0	0,1	1,3	5,1	9,4	17,6	23,6	5,1	3,8
Азербайджанская ССР	0,0	5,6	34,1	84,0	210,6	118,9	18,4	30,5	—	3,3	4,5	16,1	31,9	25,0	4,6	5,5
Литовская ССР (10)	0,3	6,7	45,0	185,0	347,1	393,2	63,8	58,3	0,2	0,0	7,2	18,4	37,4	48,2	10,7	7,0
Молдавская ССР	0,4	7,4	32,4	104,3	202,1	169,8	32,1	34,2	—	2,3	6,4	26,4	39,9	39,1	9,1	7,6
Латвийская ССР (12)	0,1	4,2	37,0	168,7	294,0	289,4	59,1	50,7	0,1	0,0	2,6	13,0	25,0	35,0	8,3	4,6
Киргизская ССР	—	7,5	31,6	98,4	184,2	148,9	19,8	31,4	—	3,7	4,3	17,4	32,2	27,4	5,2	5,7
Таджикская ССР (14)	—	3,6	14,9	61,9	121,4	62,7	9,9	18,0	—	0,6	2,3	8,3	18,0	10,0	1,8	2,6
Армянская ССР	0,4	4,1	29,5	113,4	241,7	169,8	25,7	36,7	0,5	1,9	6,8	16,1	27,3	21,3	5,0	5,4
Туркменская ССР (16)	0,2	3,1	20,1	75,0	170,5	90,2	12,7	24,1	—	1,6	7,3	14,0	35,7	10,6	3,5	5,0
Эстонская ССР	0,2	5,1	55,4	190,3	358,9	390,4	70,8	63,4	—	0,9	23,1	47,1	11,9	41,8	6,9	6,9

СССР (2)	0,2	6,2	46,7	175,7	398,5	291,0	51,2	55,0	0,1	2,1	5,9	18,5	39,1	45,7	10,3	7,1
(1) Трахея, бронхи и легкого (162)																
(18) Кожи (172, 173)																
СССР (3)	0,6	6,3	19,0	50,8	103,8	158,7	19,5	21,2	0,9	21,7	45,4	84,4	118,2	26,5	18,5	18,5
РСФСР	0,7	6,5	19,8	51,1	102,3	166,6	20,3	21,5	1,1	9,1	22,8	47,0	85,2	119,6	29,2	19,1
УССР	0,7	6,7	22,5	59,0	119,1	177,6	27,0	24,2	1,0	23,1	48,0	91,0	125,5	32,5	19,8	19,8
БССР (5)	0,5	4,5	17,0	40,2	95,4	127,9	18,2	17,9	0,6	6,7	17,5	37,5	72,7	113,3	24,7	16,0
Узбекская ССР	0,3	4,0	12,1	37,2	63,4	86,7	7,7	13,1	0,3	4,8	12,0	26,6	50,3	75,5	8,6	10,9
Казахская ССР (7)	0,7	7,1	18,0	53,3	124,5	139,6	14,6	21,9	0,8	7,3	21,8	53,1	96,4	139,5	21,2	20,7
Грузинская ССР	0,5	4,9	9,9	35,0	76,5	94,1	13,8	14,0	0,6	4,7	14,4	24,4	42,4	65,2	13,8	10,3
Азербайджанская ССР (9)	0,3	2,8	13,7	27,7	77,6	125,6	9,0	14,8	0,6	6,7	14,0	19,8	53,6	36,9	8,1	9,6
Литовская ССР	0,4	4,9	16,5	30,1	67,7	131,9	17,8	15,3	1,1	11,0	26,7	38,6	79,2	137,1	29,0	19,4
Молдавская ССР (11)	0,7	6,1	18,1	44,5	75,1	162,1	17,4	18,9	0,3	8,7	23,7	42,5	87,9	133,1	22,7	19,1
Латвийская ССР	0,5	6,6	15,0	48,6	107,8	183,1	25,9	21,8	0,3	9,7	14,6	43,5	83,2	120,5	30,2	17,4
Киргизская ССР (13)	0,7	10,0	13,5	56,9	128,1	131,4	13,8	22,0	1,0	11,3	18,6	46,1	120,4	112,0	18,9	20,5
Таджикская ССР	0,5	6,6	19,5	59,3	72,8	184,3	12,7	21,2	0,6	7,7	21,9	58,4	105,5	111,9	14,7	20,5
Армянская ССР (15)	0,8	3,4	13,6	38,8	109,4	107,5	12,1	17,4	0,5	5,1	12,1	32,3	67,0	71,9	11,6	12,5
Туркменская ССР	0,0	7,1	20,9	43,7	93,5	100,7	9,5	17,4	0,5	4,8	18,7	33,2	61,8	95,4	10,3	14,0
Эстонская ССР (17)	0,5	6,1	23,1	43,5	108,4	211,1	23,4	0,2	13,9	18,3	54,9	76,2	142,8	34,0	19,9	19,9

Key:

1. Trachea, bronchi and lung
2. USSR
3. RSFSR
4. UkrSSR
5. BSSR
6. Uzbek SSR
7. Kazakh SSR
8. Georgian SSR
9. Azerbaijani SSR
10. Lithuanian SSR
11. Moldavian SSR
12. Latvian SSR
13. Kirghiz SSR
14. Tajik SSR
15. Armenian SSR
16. Turkmen SSR
17. Estonian SSR
18. Skin

Table 5, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
(1) Женщины																
(2) Молочножелезы																
(174)																
(3) Шейки матки (180)																
СССР (4)	0,8	21,4	55,5	68,8	65,6	48,9	28,0	22,2	0,6	11,2	26,8	55,1	73,0	40,1	21,2	16,2
РСФСР	1,0	22,4	57,7	70,0	66,5	49,9	30,7	22,9	0,6	10,8	26,5	56,2	77,3	43,1	23,5	16,6
УССР (6)	1,0	22,9	58,9	75,1	68,8	51,6	33,6	23,8	0,8	13,8	29,0	59,8	72,4	37,7	25,2	17,2
БССР	1,0	22,5	50,7	58,1	55,2	37,1	25,6	19,8	0,8	8,7	21,7	48,3	65,8	27,6	18,6	13,8
Узбекская ССР (8)	0,2	12,8	26,7	39,5	37,4	30,1	8,9	12,1	0,2	9,6	20,2	37,5	46,5	19,1	7,9	10,9
Казахская ССР	0,3	17,3	47,7	62,3	56,5	36,8	18,2	18,8	0,6	12,1	29,4	59,9	81,3	50,0	17,6	18,0
Грузинская ССР (10)	1,0	21,6	53,8	76,4	70,0	40,0	27,8	22,7	0,5	7,7	20,3	34,4	28,1	23,6	11,9	9,4
Азербайджанская ССР	0,4	15,4	36,3	50,7	42,7	46,8	13,7	15,8	0,2	5,6	23,6	26,8	52,9	29,7	9,0	10,6
Литовская ССР (12)	1,4	25,1	73,3	72,1	87,1	70,9	36,0	27,8	0,7	12,7	36,0	46,1	62,6	48,8	21,8	16,5
Молдавская ССР	0,6	20,7	54,3	69,0	65,9	48,7	24,6	21,6	0,6	15,1	40,3	63,9	74,6	40,0	22,1	19,2
Латвийская ССР (14)	1,8	20,0	74,8	83,3	88,0	83,2	42,3	29,1	0,3	9,1	20,4	49,0	65,4	47,2	22,0	14,3
Киргизская ССР	0,5	14,4	43,9	50,5	51,6	24,1	14,0	16,2	0,0	12,5	32,4	53,6	78,4	30,7	14,3	16,5
Таджикская ССР (16)	0,0	8,3	36,9	25,8	48,9	17,2	8,0	11,6	0,3	3,8	19,0	32,6	41,2	31,5	7,0	9,8
Армянская ССР	1,6	28,1	66,4	64,6	93,0	51,9	24,1	26,3	1,3	13,4	35,3	61,8	57,4	22,6	15,5	16,8
Туркменская ССР (18)	—	8,8	22,0	34,2	34,1	19,0	7,0	9,8	0,0	7,2	13,0	54,3	68,3	38,1	9,6	13,2
Эстонская ССР	1,2	28,8	67,9	104,1	91,5	73,1	43,3	30,7	0,6	10,9	23,8	46,3	58,2	46,4	21,3	14,4
(20) Опухоли матки и кроветворной ткани (200—209)																
СССР	4,5	6,1	9,8	20,9	38,1	39,1	9,9	10,4	3,6	5,6	7,3	13,3	20,0	17,1	8,0	6,8
РСФСР (5)	4,8	6,1	9,6	20,9	38,1	39,3	10,3	10,5	4,0	5,7	7,1	13,1	20,1	17,5	8,5	7,0
УССР	5,7	7,4	10,8	22,5	43,1	41,4	12,6	11,8	4,8	6,8	8,6	14,2	21,0	16,7	9,6	7,9
БССР (7)	5,8	5,6	12,7	23,5	46,3	35,6	12,0	12,0	4,7	3,7	9,6	17,6	25,6	16,8	9,8	8,1
Узбекская ССР (9)	2,6	3,8	5,2	9,3	16,1	9,1	3,8	4,8	1,7	4,1	5,2	6,9	6,7	2,7	2,8	3,3
Казахская ССР	2,7	3,3	8,0	16,0	23,2	21,4	5,7	6,7	3,0	6,5	10,0	11,2	12,2	4,3	4,3	3,4
Грузинская ССР (11)	2,4	2,6	5,2	11,8	18,4	19,6	5,4	5,3	1,8	2,7	4,0	6,6	10,9	6,6	3,8	3,4
Азербайджанская ССР	0,2	6,8	9,3	25,2	32,9	106,9	7,0	10,9	0,7	4,5	1,6	3,7	7,2	1,3	1,7	2,0
Литовская ССР (13)	4,2	7,6	12,8	36,3	57,0	82,5	16,6	15,1	5,2	6,8	8,5	21,0	48,9	46,5	15,0	11,7
Молдавская ССР (15)	5,0	6,1	11,2	25,5	32,2	35,5	10,4	10,7	2,6	6,3	10,9	22,3	31,5	35,9	14,2	10,3
Латвийская ССР (15)	5,0	5,4	13,3	31,6	56,0	73,8	16,3	14,5	4,4	8,5	10,9	22,3	31,5	35,9	14,2	10,3
Киргизская ССР	3,6	9,4	5,0	10,5	24,0	13,1	5,6	6,8	2,2	5,6	3,8	9,9	12,9	14,2	4,4	4,7
Таджикская ССР (17)	2,2	3,0	4,5	6,1	8,0	19,6	3,3	4,0	1,0	1,9	6,3	10,6	9,0	11,4	2,8	3,6
Армянская ССР (17)	8,2	8,8	15,8	41,3	57,0	38,7	14,2	16,5	4,6	6,3	7,3	12,6	24,6	19,9	7,4	7,8
Туркменская ССР (19)	4,4	4,7	12,1	17,5	19,2	3,4	6,2	7,4	2,2	4,3	7,9	14,0	11,3	10,6	3,9	4,4
Эстонская ССР (19)	5,3	8,2	16,1	67,4	69,4	67,4	15,7	15,7	0,6	10,9	23,8	46,3	52,7	39,4	15,5	11,1

Key:

- 1. Women
- 2. Breast
- 3. Uterine cervix
- 4. USSR
- 5. RSFSR
- 6. UkrSSR
- 7. BSSR
- 8. Uzbek SSR
- 9. Kazakh SSR
- 10. Georgian SSR
- 11. Armenian SSR
- 12. Azerbaijani SSR
- 13. Lithuanian SSR
- 14. Moldavian SSR
- 15. Kirghiz SSR
- 16. Tajik SSR
- 17. Armenian SSR
- 18. Turkmen SSR
- 19. Estonian SSR
- 20. Tumors of lymphatic and hematopoietic tissue

Table 6. Malignant-neoplasm morbidity of population in oblasts, krais and ASSR's for economic regions in 1978-1979 (standardized parameters; composition of USSR population according to 1979 census taken as standard)

(1) Экономические районы, республики, края и области	(2) Всего (140-209)			(3) Пищевода (150)			(4) Желудка (151)			(5) Прямой кишечки (154)		
	оба пола	(6) мужчины		(7) женщины	(8) оба пола		(9) мужчины	(10) женщины	(11) оба пола	(12) мужчины		(13) женщины
		2	3		4	5	6	7	8	9	10	
СССР (9)	200,2	264,0	160,9	6,3	10,6	4,2	37,9	58,4	26,7	7,6	8,9	7,1
РСФСР (10)	214,3	297,1	179,6	5,5	9,8	3,5	44,5	70,3	31,5	8,3	9,8	7,7
Северо-Западный район (11)												
Архангельская обл. (12)	247,7	363,6	203,4	14,1	25,5	9,3	57,6	96,7	42,2	9,2	9,7	9,0
Вологодская обл. (13)	200,6	304,1	164,5	6,5	12,9	4,0	55,1	89,6	39,3	8,0	9,8	7,4
г. Ленинград (14)	250,5	323,2	221,4	8,8	11,1	7,5	48,9	73,0	37,5	14,3	18,2	13,0
Ленинградская обл.	211,3	302,4	173,6	7,6	14,9	4,2	50,1	75,2	38,0	10,9	13,4	9,4
Мурманская обл. (16)	231,5	370,5	186,9	10,1	17,8	6,4	44,1	73,1	30,8	12,4	13,6	11,8
Новгородская обл. (17)	234,6	347,9	195,0	5,9	10,6	3,8	66,0	103,4	43,6	9,3	9,8	9,8
Псковская обл. (18)	195,2	268,6	166,8	2,2	4,2	1,1	55,7	77,4	40,9	8,2	11,5	6,7
Карельская АССР	223,2	337,8	177,9	15,0	25,0	11,2	51,1	77,9	33,3	8,4	11,5	7,1
Коми АССР (20)	210,8	314,0	172,1	8,2	12,2	5,9	39,1	66,3	25,9	7,9	8,0	7,9
Центральный район												
Брянская обл. (22)	190,5	269,4	154,6	3,5	7,5	1,7	50,5	81,1	35,3	5,6	6,6	5,3
Владимирская обл. (24)	209,2	312,8	165,3	4,8	10,6	2,2	58,1	97,1	38,6	9,0	12,7	7,9
Ивановская обл. (25)	225,5	327,8	187,4	6,2	10,1	4,4	55,9	94,1	38,5	8,7	9,5	8,5
Калининская обл.	202,2	309,7	160,2	4,2	9,0	2,3	58,3	95,5	41,9	8,1	10,1	7,7
Калужская обл. (26)	184,6	273,1	147,9	3,4	6,7	1,9	49,4	80,7	34,0	6,7	8,6	6,0
Костромская обл.	192,5	284,0	158,8	5,2	10,2	2,9	53,5	85,7	39,6	8,5	12,5	8,5
г. Москва (28)	234,5	291,0	210,7	5,8	9,4	3,9	66,7	67,7	35,6	12,5	15,0	11,4
Московская обл.	227,7	312,4	192,4	7,2	11,8	4,9	55,0	85,0	40,1	9,8	12,0	9,0
Орловская обл. (30)	163,5	225,9	139,0	2,1	3,6	1,2	43,7	70,6	30,6	5,5	6,5	5,0
Рязанская обл. (32)	194,5	287,7	152,9	2,7	6,7	0,9	51,0	83,9	34,3	6,4	6,5	6,4
Смоленская обл.	206,2	287,5	173,1	3,1	6,8	1,3	58,7	91,1	43,4	8,9	10,7	8,6
Тульская обл.	220,1	313,9	178,9	3,5	7,2	1,5	55,2	91,1	37,8	9,3	10,7	8,7
Ярославская обл. (34)	222,1	327,9	181,4	6,4	11,2	4,5	59,8	97,1	43,5	10,5	13,2	9,4

Key:

1. Economic regions, republics, krais and oblasts
2. All
3. Esophagus
4. Stomach
5. Rectum
6. both sexes
7. men
8. women
9. USSR
10. RSFSR
11. Northwestern region
12. Arkhangelsk Oblast
13. Vologda Oblast
14. Leningrad City
15. Leningrad Oblast
16. Murmansk Oblast
17. Novgorod Oblast
18. Pskov Oblast
19. Karelian ASSR
20. Komi ASSR
21. Central region
22. Bryansk Oblast
23. Vladimir Oblast
24. Ivanovo Oblast
25. Kalinin Oblast
26. Kaluga Oblast
27. Kostroma Oblast
28. Moscow City
29. Moscow Oblast
30. Orel Oblast
31. Ryazan Oblast
32. Smolensk Oblast
33. Tula Oblast
34. Yaroslavl Oblast

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13
<b>В о л г о - В я т с к и й</b> <b>р а й о н : (1)</b>												
г. Горький (2)	259,2	341,9	222,5	6,0	8,8	4,6	61,1	92,2	45,2	11,7	13,0	10,9
Горьковская обл. (4)	224,9	313,1	187,2	4,6	7,8	3,1	53,9	85,0	39,2	8,6	9,6	8,2
Кировская обл. (6)	186,9	265,8	156,9	3,3	7,4	1,6	35,1	53,3	26,7	10,0	9,9	10,2
Марийская АССР (6)	146,6	209,6	126,6	3,8	7,3	2,2	38,8	60,4	23,0	5,3	7,5	4,6
Мордовская АССР	164,3	249,7	130,6	2,2	5,1	1,0	42,7	73,2	28,8	3,3	4,9	2,5
Чувашская АССР	132,4	179,8	115,6	3,3	7,5	1,5	30,6	45,9	23,7	4,1	4,2	3,8
<b>Ц е н т р а л ь н о - Ч е р н о-</b> <b>з е м н ы й р а й о н : (8)</b>												
Белгородская обл. (9)	174,1	239,7	145,6	1,3	2,5	0,6	35,1	58,7	22,4	5,7	8,3	4,5
Воронежская обл. (11)	174,7	238,5	144,8	2,3	5,5	0,7	34,1	55,8	22,5	5,9	7,1	5,5
Курская обл. (11)	154,3	208,6	129,1	2,2	5,0	0,7	39,0	62,8	25,9	4,5	5,4	4,1
Липецкая обл. (13)	193,0	278,6	158,9	1,9	4,5	0,7	46,3	78,8	31,0	6,3	7,6	6,0
Тамбовская обл. (13)	172,3	259,5	134,3	4,4	9,7	1,8	40,4	70,4	25,6	5,3	7,8	4,6
<b>П о в о л ж с к и й р а й о н :</b>												
Астраханская обл. (15)	257,7	371,1	202,2	19,9	24,4	17,2	45,4	78,9	27,3	5,6	7,6	4,4
Волгоградская обл.	233,2	324,1	190,4	4,5	7,0	3,2	37,0	62,0	23,9	6,6	7,1	6,6
г. Куйбышев (17)	254,5	345,5	214,2	5,4	9,1	3,4	51,8	77,7	37,4	10,5	13,4	8,9
Куйбышевская обл.	229,8	317,9	188,6	4,8	8,6	2,9	44,2	67,6	31,0	7,8	9,8	6,8
Пензенская обл. (19)	204,3	295,7	162,5	3,9	6,8	2,3	47,5	75,6	33,3	5,5	5,9	4,9
Саратовская обл.	249,7	337,4	209,6	7,1	12,2	4,7	46,5	73,8	32,0	7,1	8,6	6,4
Ульяновская обл. (21)	192,0	273,5	156,9	4,8	9,0	2,7	39,7	68,9	25,1	5,5	6,4	5,3
Башкирская АССР (23)	183,1	267,1	147,7	12,4	22,6	7,8	36,8	60,5	25,7	6,5	8,4	5,9
Калмыкская АССР (23)	206,3	288,8	160,8	19,0	35,0	8,6	32,8	47,2	23,1	3,5	2,9	3,8
Татарская АССР	186,4	267,8	153,9	10,9	18,1	7,9	41,8	67,1	30,3	7,4	8,2	7,3
<b>С е в е р о - К а з а к с к и й</b> <b>р а й о н : (25)</b>												
Краснодарский край (27)	218,6	279,6	190,3	2,6	5,2	1,3	29,8	47,6	20,0	7,2	8,6	6,4
Ставропольский край (27)	229,4	296,1	196,7	2,5	4,3	1,3	34,0	54,2	23,0	5,9	6,8	5,7
Ростовская обл.	226,4	304,6	189,1	2,8	5,4	1,5	33,5	58,1	20,0	7,3	8,9	6,6
Дагестанская АССР (29)	120,8	166,3	95,2	5,6	12,8	1,8	16,0	26,1	10,3	2,5	2,2	2,7

Key:

1. Volga-Vyatka region
2. Gorkiy
3. Gorkiy Oblast
4. Kirov Oblast
5. Mari ASSR
6. Mordovian ASSR
7. Chuvash ASSR
8. Central black-earth region
9. Belgorod Oblast
10. Voronezh Oblast
11. Kursk Oblast
12. Lipetsk Oblast
13. Tambov Oblast
14. Volga region
15. Astrakhan Oblast
16. Volgograd Oblast
17. Kuybyshev Oblast
18. Kuybyshev Oblast
19. Penza Oblast
20. Saratov Oblast
21. Ulyanovsk Oblast
22. Bashkir ASSR
23. Kalmyk ASSR
24. Tatar ASSR
25. Northern Caucasus region
26. Krasnoyarsk Kray
27. Stavropol Kray
28. Rostov Oblast
29. Dagestan ASSR

Table 6., continued.

1	2	3	4	5	6	7	8	9	10	11	12	13
Кабардино-Балкарская АССР (1)	216,9	278,7	184,5	3,8	6,1	2,6	35,0	53,7	23,6	6,0	6,1	6,0
Северо-Осетинская АССР (2)	192,9	229,0	176,0	3,9	7,4	1,7	26,6	38,8	19,6	5,9	6,7	5,4
Чечено-Ингушская АССР (3)	263,7	335,1	216,8	4,8	8,0	2,4	27,7	48,8	13,3	6,2	6,5	5,6
<b>Уральский район: (4)</b>												
Курганская обл. (5)	231,4	309,5	198,6	2,5	3,7	1,8	40,7	58,0	31,7	6,1	6,0	6,1
Оренбургская обл.	224,5	311,9	186,8	8,8	14,8	5,7	38,5	61,3	26,9	6,3	6,2	6,3
Пермская обл. (7)	189,1	255,1	160,1	4,8	9,4	2,8	35,8	55,4	26,1	10,3	11,7	9,8
г. Свердловск	219,9	287,3	196,9	4,1	8,0	2,3	38,4	55,8	30,5	11,1	13,6	10,1
Свердловская обл. (9)	240,4	326,8	206,6	3,9	8,0	2,0	44,4	72,4	31,3	10,7	13,0	10,1
г. Челябинск	253,4	320,5	224,2	5,2	8,1	3,4	43,5	65,6	32,0	10,4	15,4	8,3
Челябинская обл. (11)	240,3	325,3	200,3	5,9	9,1	4,1	46,7	72,1	33,1	8,8	11,2	8,1
Удмуртская АССР	186,1	259,1	161,7	6,0	10,7	3,9	38,3	58,3	30,4	10,5	13,1	9,3
<b>Западно-Сибирский район: (13)</b>												
Алтайский край	229,8	318,3	190,8	3,1	6,7	1,4	44,1	69,6	30,7	7,2	7,4	7,2
Кемеровская обл. (15)	222,5	301,2	185,3	3,6	7,4	1,5	44,8	71,3	30,4	8,1	10,7	7,0
г. Новосибирск	233,9	306,0	206,2	4,8	10,4	2,2	47,4	73,5	35,2	9,5	11,1	8,9
Новосибирская обл. (17)	220,5	298,2	187,2	3,6	7,3	1,8	44,4	68,7	32,5	7,5	9,1	6,9
г. Омск	201,9	270,6	173,8	3,6	6,8	2,2	36,9	55,3	26,8	7,4	8,7	6,7
Омская обл. (19)	206,3	282,3	172,9	4,4	8,2	2,6	39,4	62,0	27,4	6,8	7,6	6,7
Томская обл. (21)	174,9	232,5	149,1	3,2	7,5	0,8	39,4	60,9	28,6	6,5	6,6	5,7
Тюменская обл. (24)	199,1	284,9	164,1	4,4	8,8	1,9	35,3	56,0	24,6	7,3	8,4	6,6
<b>Восточно-Сибирский район:</b>												
Сибирский краи:												
Красноярский край (23)	206,0	280,0	170,6	3,9	7,3	1,9	47,3	75,1	32,6	6,6	8,0	6,0
Иркутская обл.	231,4	307,1	193,8	6,5	12,9	3,0	54,1	82,5	38,1	8,7	8,3	8,8
Читинская обл. (25)	209,4	274,9	175,5	6,7	12,3	3,7	44,4	73,6	26,3	6,1	7,2	5,5
Бурятская АССР	244,2	326,2	201,7	17,8	27,9	12,0	59,6	92,8	40,4	5,9	6,1	5,6
Тувинская АССР (27)	229,4	264,8	202,9	31,0	35,1	27,7	49,2	57,2	40,9	1,8	2,9	—

Key:

1. Kabardino-Balkar ASSR
2. North Ossetian ASSR
3. Chechen-Ingush ASSR
4. Urals region
5. Kurgan Oblast
6. Orenburg Oblast
7. Perm Oblast
8. Sverdlovsk City
9. Sverdlovsk Oblast
10. Chelyabinsk Oblast
11. Chelyabinsk City
12. Udmurt ASSR
13. Western Siberian region
14. Altai Kray
15. Kemerovo Oblast
16. Novosibirsk City
17. Novosibirsk Obl.
18. Omsk City
19. Omsk Oblast
20. Tomsk Oblast
21. Tyumen Oblast
22. Eastern Siberian region
23. Krasnoyarsk Kray
24. Irkutsk Oblast
25. Chita Oblast
26. Buryat ASSR
27. Tuva ASSR

Table 6, continued.

	1	2	3	4	5	.6	7	8	9	10	11	12	13.
<b>Дальнеевосточный край (1)</b>													
Приморский край (3)	237,6	306,9	198,5	4,3	8,6	1,3	50,1	74,1	34,7	7,6	7,8	10,5	7,6
Хабаровский край (3)	259,0	346,7	210,2	6,2	9,8	3,8	54,7	86,3	35,5	8,7	5,1	5,1	8,0
Амурская обл. (5)	216,7	285,7	174,4	5,2	7,8	3,2	47,0	74,2	28,1	5,3	4,0	4,0	4,9
Камчатская обл. (5)	244,7	355,2	182,1	12,5	25,1	1,7	42,0	61,4	29,4	7,2	7,9	7,9	7,7
Магаданская обл. (7)	253,4	331,4	190,5	11,2	16,7	6,5	41,4	63,6	23,4	5,8	10,2	6,8	4,0
Сахалинская обл. (7)	250,2	387,5	179,5	9,2	16,3	4,7	50,9	85,9	31,3	8,1	4,8	3,1	3,1
Якутская АССР	225,4	300,9	173,3	50,2	83,2	29,6	48,2	60,2	33,0	4,2	4,8	3,1	3,1
УКРАИНСКАЯ ССР (8)	198,7	259,7	169,0	2,4	4,8	1,0	30,8	49,2	20,6	8,1	9,7	7,3	7,3
<b>Донецкого района:</b>													
г. Днепропетровск (11)	221,1	274,0	194,7	2,0	4,0	0,6	33,5	49,1	24,1	10,5	10,8	10,0	10,7
Днепропетровская обл.	215,5	286,8	180,6	2,1	4,3	0,8	33,5	51,7	23,4	9,0	10,0	8,6	8,6
г. Донецк (13)	184,9	245,3	157,5	1,7	2,6	0,9	32,2	49,6	22,8	7,4	9,7	5,9	5,9
Донецкая обл.	206,4	275,4	171,4	2,1	3,8	1,2	34,3	56,1	22,4	7,9	9,4	7,2	7,2
Запорожская обл. (15)	202,8	280,5	166,7	1,9	4,0	0,8	28,1	46,3	18,5	9,0	11,8	7,5	7,5
Кировоградская обл. (17)	212,3	296,6	172,5	2,6	5,5	1,1	30,2	48,9	20,4	8,7	10,4	7,7	7,7
Воронежская обл.	214,3	277,1	185,1	2,3	4,6	1,1	34,0	54,8	22,5	8,2	9,6	7,6	7,6
Полтавская обл.	185,4	245,4	159,4	1,9	3,9	0,7	26,1	42,0	17,9	8,5	11,1	7,3	7,3
Сумская обл. (19)	183,6	236,5	159,9	2,2	5,0	0,6	32,0	49,8	22,7	7,7	9,5	7,0	7,0
г. Харьков	229,7	278,9	209,2	2,4	4,0	1,5	35,7	57,2	24,3	10,4	13,2	9,1	9,1
Харьковская обл. (21)	197,4	249,1	175,3	2,1	3,8	1,0	31,2	51,1	20,6	8,5	9,9	7,9	7,9
<b>Юго-Западный район:</b>													
Винницкая обл. (23)	180,7	247,0	149,8	4,0	9,6	1,0	26,4	45,5	16,5	6,4	9,0	5,1	5,1
Волынская обл.	163,9	196,6	143,9	1,4	3,1	0,2	28,2	43,3	17,8	7,0	8,3	5,9	5,9
Житомирская обл. (25)	174,6	226,0	150,1	3,1	6,8	1,0	31,3	50,8	20,4	7,5	8,9	6,6	6,6
Закарпатская обл.	180,1	220,3	149,6	1,0	1,3	0,4	25,3	38,8	14,7	5,3	6,1	4,8	4,8
Ивано-Франковская обл. (27)	187,8	236,9	158,2	1,7	2,9	0,9	35,3	52,4	24,4	5,2	5,2	5,2	5,2
г. Киев	261,3	303,6	243,1	2,8	5,2	1,5	33,8	50,3	27,0	11,9	14,0	10,6	10,6
Киевская обл. (29)	284,4	386,1	216,5	3,7	8,0	1,4	40,6	64,7	27,7	9,3	10,8	8,9	8,9
<b>Key:</b>													
1. Far Eastern region	10. Donets-Dniepr region	17. Voroshilovgrad Oblast	24. Volyn Oblast										
2. Maritime Kray	11. Dnepropetrovsk Oblast	18. Poltava Oblast	25. Zhitomir Oblast										
3. Khabarovsk Kray	12. Dnepropetrovsk Oblast	19. Sumy Oblast	26. Transcarpathian Oblast										
4. Anur Oblast	13. Donetsk City	20. Kharkov City	27. Ivano-Frankovsk Oblast										
5. Kamchatka Oblast	21. Donetsk Oblast	22. Southwestern region	28. Kiev City										
6. Magadan Oblast	14. Donetsk Oblast	23. Kirovograd Obl.	29. Kiev Oblast										
7. Sakhalin Oblast	15. Zaporozhye Obl.	16. Kirovograd Obl.	23. Vinnitsa Oblast										
8. Yakutsk ASSR	17. Voronezh Oblast	18. Poltava Oblast	24. Volyn Oblast										
9. Ukrainian SSR	19. Sumy Oblast	20. Kharkov City	25. Zhitomir Oblast										

Table 6, continued.

1	2	3	4	5	6.	7	8	9	10	11	12	13
г. Львов (1)	229,0	280,1	204,3	2,4	5,4	0,5	31,9	48,8	21,6	9,9	11,8	8,3
Львовская обл.	154,9	201,2	144,1	1,3	2,6	0,3	24,7	38,5	15,7	6,6	7,9	5,7
Ровенская обл. (3)	167,8	202,7	148,4	1,1	2,0	0,4	31,7	48,4	20,8	7,6	9,3	6,5
Тернопольская обл.	174,8	231,3	142,4	1,3	2,9	0,3	43,5	13,9	6,4	8,6	4,9	4,9
Хмельницкая обл. (5)	161,9	219,6	135,2	2,1	4,8	0,5	25,2	40,5	16,7	5,7	7,1	5,0
Черкасская обл.	189,5	260,3	158,4	2,9	6,5	1,1	28,7	50,2	17,9	8,5	12,0	7,0
Черниговская обл. (7)	142,7	194,8	121,4	1,3	3,0	0,4	29,5	49,0	19,7	6,3	5,5	6,4
Черновицкая обл.	188,0	225,9	166,5	1,2	1,9	0,6	25,9	39,8	16,1	7,2	8,4	6,4
Южный район: (9)												
Крымская обл.	218,6	291,7	184,0	3,0	6,4	1,3	33,6	54,1	22,3	7,8	8,3	7,9
Николаевская обл. (11)	221,7	304,9	178,1	2,3	3,6	1,2	26,4	40,4	18,0	8,5	10,5	7,3
г. Одесса	288,9	353,1	258,3	4,6	8,3	2,4	34,5	46,4	27,4	12,3	14,7	11,2
Одесская обл. (13)	231,6	294,3	197,9	3,5	6,8	1,7	29,9	45,5	20,4	9,4	11,1	8,5
Херсонская обл.	246,1	352,7	194,2	2,8	5,9	1,1	30,4	50,1	19,6	7,6	9,3	6,8
БЕЛОРУССКАЯ ССР (15)	171,2	219,4	147,0	1,7	3,4	0,7	39,0	53,5	27,7	7,2	8,2	6,8
г. Минск	260,9	319,8	235,5	1,9	3,0	1,2	46,9	60,0	34,0	13,8	17,9	11,5
Брестская обл. (17)	162,9	195,8	143,0	1,7	3,4	0,7	36,3	52,4	25,6	6,2	7,1	5,7
Брестская обл.	168,2	226,8	140,2	1,5	3,0	0,7	41,9	62,7	30,5	7,3	8,9	6,8
Гомельская обл. (19)	161,7	202,6	142,2	1,9	3,6	1,0	33,2	53,0	23,2	6,7	7,4	6,3
Гродненская обл. (21)	154,3	196,8	123,4	1,3	2,9	0,2	34,0	53,8	20,8	5,9	6,5	5,5
Минская обл. (21)	161,5	214,5	134,2	1,5	3,2	0,6	41,3	61,7	29,2	6,5	6,6	6,8
Могилевская обл.	176,1	233,6	148,1	1,7	3,7	0,5	41,8	66,9	29,3	7,0	6,7	7,3
МОЛДАВСКАЯ ССР (23)	166,9	192,9	151,5	1,6	3,1	0,5	19,2	23,4	12,9	7,1	8,2	6,3
г. Кишинев	257,5	273,5	255,2	0,9	1,0	0,9	30,8	39,4	24,3	12,5	12,2	12,8
Прибалтийский р-н: (25)												
Калiningradская обл.	224,7	299,8	193,5	3,9	6,4	2,6	49,1	76,0	35,4	10,1	10,3	9,9
ЛИТОВСКАЯ ССР (27)	208,9	238,6	178,9	1,8	3,5	0,6	33,7	52,5	24,6	8,8	10,9	7,3
г. Вильнюс (28)	193,4	243,5	171,3	1,3	2,2	0,8	26,7	32,3	22,3	8,5	10,1	7,3

Key:

1. Lvov City
2. Lvov Oblast
3. Rovno Oblast
4. Ternopol Oblast
5. Khmelnitskiy Oblast
6. Cherkassy Oblast
7. Chernigov Oblast
8. Chernovitsy Oblast
9. Southern region
10. Crimean Oblast
11. Nikolayev Oblast
12. Odessa City
13. Odessa Oblast
14. Kherson Oblast
15. Belorussian SSR
16. Minsk City
17. Brest Oblast
18. Vitebsk Oblast
19. Gomel Oblast
20. Grodno Oblast
21. Minsk Oblast
22. Mogilev Oblast
23. Moldavian SSR
24. Kishinev City
25. Baltic region
26. Kaliningrad Oblast
27. Lithuanian Oblast
28. Vilnius City

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13
ЛАТВИЙСКАЯ ССР (1)	195,5	236,0	172,3	1,5	3,1	0,6	28,3	44,3	20,5	6,1	7,6	3,2
г. Рига (2)	223,4	260,1	206,1	2,1	3,6	1,0	32,3	46,4	24,9	6,7	8,1	5,5
ЭСТОНСКАЯ ССР (3)	224,7	278,1	199,5	2,2	4,5	0,7	34,1	49,3	25,0	9,5	11,4	8,6
г. Таллин (4)	254,5	327,7	225,9	2,3	3,8	1,4	39,2	62,3	27,1	10,7	14,9	8,0
ЗАКАВКАЗСКИЙ район: (5)												
ГРУЗИНСКАЯ ССР (6)												
г. Тбилиси (7)	109,4	123,4	103,4	1,8	2,8	1,1	12,1	16,9	9,1	3,1	3,6	2,8
АЗЕРБАЙДЖАНСКАЯ ССР	144,3	148,5	140,5	2,3	3,8	1,6	15,7	23,0	11,2	5,9	6,6	5,4
г. Баку (9)	160,9	212,4	130,0	12,7	18,5	9,2	32,2	49,3	21,5	4,0	4,9	3,4
АРМЕНИЙСКАЯ ССР (10)	224,1	287,2	192,3	12,1	14,6	10,5	42,0	62,4	30,3	5,9	6,8	5,2
г. Ереван (11)	169,5	201,0	150,7	4,4	7,1	2,5	26,4	38,3	18,3	5,0	6,2	4,0
СРЕДНЕАЗИАТСКИЙ район: (12)	247,7	282,6	227,5	6,7	9,1	4,5	36,7	55,8	24,9	7,3	9,4	5,6
УЗБЕКСКАЯ ССР (13)	123,3	143,3	110,8	22,7	31,5	16,7	18,8	27,4	12,8	2,7	3,0	2,5
г. Ташкент (14)	159,6	191,2	144,7	10,0	16,2	6,5	22,4	32,6	16,7	4,5	6,9	3,3
Андижанская обл.	132,7	161,9	113,8	40,5	55,7	30,2	22,1	31,6	15,2	2,1	2,0	2,2
Бухарская обл. (16)	126,2	148,4	111,5	22,4	32,0	15,7	21,5	32,2	13,2	2,2	2,3	1,9
Джизакская обл. (17)	90,1	121,3	66,7	14,2	21,6	7,5	10,1	19,8	1,1	2,9	0,7	0,7
Кашкадарьянская обл. (18)	70,0	88,6	56,4	11,0	16,5	5,6	10,3	14,2	7,4	0,6	0,6	0,7
Наманганская обл.	99,7	118,7	86,2	25,9	33,7	20,1	15,8	23,7	10,0	2,6	3,1	2,1
Самаркандская обл. (20)	109,0	121,9	101,4	13,3	19,0	8,9	18,5	27,2	12,4	1,7	1,5	1,8
Сурхандарьянская обл.	89,8	104,7	80,4	16,1	22,5	11,7	9,5	12,8	5,6	2,1	2,2	2,1
Сырдарьинская обл. (22)	95,0	108,4	85,1	11,5	15,9	7,6	11,1	15,3	6,7	0,8	—	—
Ташкентская обл.	152,7	179,7	136,8	21,0	30,0	15,0	27,4	39,5	19,0	3,1	3,1	3,0
Ферганская обл. (24)	110,8	129,2	99,0	23,2	34,5	15,6	14,6	21,8	9,8	2,5	2,1	2,6
Хорезмская обл.	93,1	101,9	86,6	23,5	31,6	15,8	8,3	13,7	3,6	2,1	1,8	2,2
Каракалпакская АССР (26)	166,3	183,2	153,2	72,8	79,1	67,5	26,0	40,1	14,9	1,1	1,1	1,2

Key:

1. Latvian SSR
2. Riga City
3. Estonian SSR
4. Tallinn City
5. Transcaucasian region
6. Georgian SSR
7. Tbilisi City
8. Azerbaijani SSR
9. Baku City
10. Armenian SSR
11. Erevan City
12. Central Asian region
13. Uzbek SSR
14. Tashkent City
15. Andizhan Oblast
16. Bukhara Oblast
17. Dzhizak Oblast
18. Kashka-Darya Oblast
19. Namangan Oblast
20. Samarkand Oblast
21. Surkhan-Darya Obl.
22. Syr-Darya Oblast
23. Tashkent Oblast
24. Fergana Oblast
25. Khorezm Oblast
26. Kara-Kalpak ASSR

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13
КИРГИЗСКАЯ ССР (1)	166,9	200,6	142,8	10,2	14,5	7,3	32,2	50,7	20,5	4,2	4,8	3,7
г. Фрунзе (2)	251,4	323,1	217,7	7,0	8,5	6,9	44,3	66,1	33,1	7,1	11,6	5,0
ТАДЖИКСКАЯ ССР (3)	118,9	136,5	106,2	11,6	16,1	8,2	18,0	27,5	10,8	2,5	2,7	2,4
г. Душанбе (4)	265,0	312,3	241,7	8,6	12,9	6,4	35,1	53,8	24,1	5,6	5,1	6,0
ТУРКМЕНСКАЯ ССР (5)	179,6	207,1	162,4	52,6	63,2	46,2	25,5	35,4	18,5	3,0	2,2	3,4
г. Ашхабад (6)	224,5	302,8	186,9	24,7	36,2	18,9	34,3	50,5	22,5	6,7	3,6	6,9
КАЗАХСКАЯ ССР (7)	252,0	294,5	223,9	34,2	40,6	29,7	42,8	59,7	30,8	7,0	7,0	7,2
г. Алма-Ата (8)	179,0	225,1	157,7	7,5	11,7	5,2	25,2	33,3	19,0	6,6	6,5	6,8
Актюбинская обл.	263,8	342,1	219,3	67,3	83,5	56,8	45,3	70,0	30,9	4,9	6,2	3,7
Алма-Атинская обл. (10)	230,7	302,1	187,1	27,6	40,4	19,3	42,7	68,0	27,2	4,5	4,6	4,4
Восточно-Казахстанская обл.	225,1	300,9	186,5	15,7	22,5	11,6	33,6	52,7	22,4	6,6	6,8	6,5
Гурьевская обл. (12)	255,3	362,5	201,3	102,8	144,2	82,2	31,7	49,0	22,2	3,8	4,6	2,7
Джамбульская обл.	165,1	198,3	145,7	22,1	25,9	20,0	24,2	38,2	15,9	3,1	2,7	3,3
Джезказганская обл. (14)	243,6	309,8	204,7	39,1	45,8	34,7	41,7	60,9	30,1	6,8	6,0	7,4
Карагандинская обл.	243,4	313,1	208,6	14,7	22,2	10,8	39,1	64,0	24,8	7,9	10,1	6,8
Кзыл-Ординская обл. (16)	206,9	228,0	193,7	91,1	92,3	90,8	33,3	41,4	26,5	2,1	1,7	2,2
Кокчетавская обл.	212,3	268,4	181,2	18,9	24,5	15,8	40,2	63,5	26,2	6,8	6,6	6,9
Костанайская обл. (18)	232,2	319,9	186,3	17,0	23,3	13,8	46,3	72,5	31,9	8,2	9,7	7,6
Мангышлакская обл.	164,5	188,0	141,4	72,8	83,2	64,5	32,8	51,5	19,7	0,8	1,7	—
Павлодарская обл. (20)	216,6	295,2	178,2	24,8	44,1	15,5	43,0	66,4	31,2	6,6	6,9	6,7
Северо-Казахстанская обл.	221,8	308,8	177,7	9,1	15,1	5,7	40,0	59,9	29,4	5,4	5,9	4,6
Семипалатинская обл. (22)	218,2	295,1	173,2	39,2	58,5	27,5	36,7	61,7	21,6	5,9	6,4	5,7
Талды-Курганская обл.	202,9	252,8	172,4	29,9	40,0	23,4	40,3	63,9	24,0	3,9	4,8	3,4
Тургайская обл. (24)	169,8	226,5	135,6	25,5	33,9	21,0	26,1	37,5	17,7	0,4	0,8	—
Уральская обл.	210,5	292,1	170,5	47,7	57,0	38,1	27,3	43,5	18,0	5,6	5,7	5,6
Чимкентская обл. (26)	151,0	182,7	133,0	29,0	36,0	25,2	22,2	35,0	14,2	4,3	4,3	2,8
Целиноградская обл.	195,9	251,1	164,9	16,0	22,1	12,2	38,2	52,8	29,6	7,2	6,5	6,5

Key:

1. Kirghiz SSR
2. Frunze City
3. Tajik SSR
4. Dushanbe City
5. Turkmen SSR
6. Ashkhabad City
7. Kazakh SSR
8. Alma-Ata City
9. Aktyubinsk Oblast
10. Alma-Ata Oblast
11. East Kazakhstan Oblast
12. Guryev Oblast
13. Dzhambul Oblast
14. Dzhezkazgan Oblast
15. Karaganda Oblast
16. Kzyly-Orda Oblast
17. Kokchetav Oblast
18. Kustanay Oblast
19. Mangyshlak Obl.
20. Pavlodar Oblast
21. North Kazakhstan Oblast
22. Semipalatinsk Obl.
23. Taldy-Kurgan Obl.
24. Turgay Oblast
25. Uralsk Oblast
26. Chimkent Oblast
27. Tselinograd Oblast

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12
СССР (1)	28,3	64,2	8,4	18,9	23,7	22,6	24,9	21,7	8,6	11,2	7,1
РСФСР (2)	31,0	74,6	8,7	19,7	24,3	23,1	25,6	22,4	8,7	11,4	7,2
<b>Северо-Западный район: (3)</b>											
Архангельская обл. (4)	34,5	95,7	6,8	25,9	19,6	16,0	18,5	15,6	11,9	16,3	9,3
Вологодская обл.	23,4	70,1	4,3	14,9	34,0	16,0	16,0	16,3	11,2	16,1	9,2
г. Ленинград (6)	34,2	84,9	10,8	14,8	22,6	17,9	19,7	16,0	10,5	13,2	9,3
Ленинградская обл.	33,4	83,5	9,4	18,2	23,5	15,7	15,3	15,8	6,0	8,0	4,8
Мурманская обл. (8)	33,6	109,4	9,2	17,2	19,7	25,2	19,7	22,0	18,0	12,3	10,3
Новгородская обл.	33,7	97,2	5,2	13,7	22,5	15,5	17,0	14,7	11,5	11,4	11,8
Псковская обл. (10)	25,8	66,7	5,7	13,6	20,8	11,2	17,8	7,6	9,8	12,4	6,5
Карельская АССР	35,1	95,2	8,0	13,6	21,2	14,6	17,9	13,3	9,4	17,4	9,2
Коми АССР (12)	34,5	89,0	9,7								
<b>Центральный район:</b>											
Брянская обл. (14)	26,9	65,3	8,0	12,0	17,7	22,3	23,6	22,0	7,2	8,6	6,3
Владимирская обл.	28,4	78,7	5,1	16,3	21,9	20,9	23,2	20,0	7,3	8,8	
Ивановская обл. (16)	28,5	80,6	5,3	20,5	25,1	26,1	31,4	24,5	6,4	8,5	5,4
Калининская обл.	29,3	81,3	5,9	13,6	21,6	10,8	12,2	10,1	8,7	11,6	
Калужская обл. (18)	27,8	73,6	6,6	14,0	18,7	13,9	16,9	12,9	8,1	11,5	
Костромская обл.	24,6	67,9	5,4	13,2	21,9	18,3	20,9	17,7	8,7	12,2	8,3
г. Москва (20)	30,7	69,9	10,5	14,4	38,1	16,7	18,3	16,3	10,4	13,0	8,9
Московская обл. (22)	31,1	77,3	8,6	15,7	29,1	20,8	23,5	19,9	9,7	12,7	8,2
Орловская обл.	22,8	54,6	6,5	16,4	19,8	14,9	15,5	14,5	6,5	7,8	5,7
Рязанская обл.	27,0	66,7	6,5	13,9	19,9	15,4	16,2	15,0	10,7	13,5	9,0
Смоленская обл. (24)	25,4	63,0	7,2	16,3	23,3	15,4	18,1	14,8	6,2	8,0	4,9
Тульская обл.	34,6	83,5	9,3	20,2	25,1	16,2	18,9	15,4	8,6	11,3	6,7
Ярославская обл. (26)	29,5	78,8	7,5								

Key:

1. USSR
2. RSFSR
3. Northwestern region
4. Arkhangelsk Oblast
5. Vologda Oblast
6. Leningrad City
7. Leningrad Oblast
8. Murmansk Oblast
9. Novgorod Oblast
10. Pskov Oblast
11. Karelian ASSR
12. Komi ASSR
13. Central region
14. Bryansk Oblast
15. Vladimir Oblast
16. Ivanovo Oblast
17. Kalinin Oblast
18. Kaluga Oblast
19. Kostroma Oblast
20. Moscow City
21. Moscow Oblast
22. Orel Oblast
23. Ryazan Oblast
24. Smolensk Oblast
25. Tula Oblast
26. Yaroslavl Oblast

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12
<b>В о л г о - В я т с к и й</b> район. (1)											
г. Горький (2)	36,9	90,8	8,9	16,3	33,0	25,6	26,3	25,3	10,7	13,8	9,0
Горьковская обл.	29,2	75,7	6,7	16,9	23,1	25,3	24,9	9,8	12,9	8,0	
Кировская обл. (4)	26,6	71,0	6,8	24,4	15,4	16,8	19,5	16,5	8,8	12,5	7,0
Марийская АССР	18,4	48,3	6,0	18,6	16,0	18,3	21,7	17,6	6,3	7,4	5,8
Мордовская АССР (6)	19,1	59,3	4,3	10,9	15,2	21,9	22,9	21,8	8,2	10,9	6,6
Чувашская АССР	12,5	32,3	3,7	18,6	14,3	10,7	10,8	10,4	7,3	10,6	5,6
<b>Ц е н т р а л ь н о -</b> Ч е р н о з е м н ы й р а й о н . (8)											
Белгородская обл.	23,6	55,1	7,4	16,3	17,5	23,7	28,2	22,4	7,6	8,8	6,7
Воронежская обл. (10)	26,2	62,4	6,5	15,9	21,4	23,3	24,8	23,1	5,3	7,2	4,1
Курская обл. (12)	19,3	45,1	5,5	14,2	18,9	17,6	18,9	17,2	5,9	7,5	4,7
Липецкая обл.	28,7	71,8	7,6	18,6	19,4	20,3	22,7	19,5	7,9	11,1	6,6
Тамбовская обл.	23,4	58,8	5,1	13,3	21,1	16,7	19,7	15,8	4,1	4,6	3,8
<b>П о в о л ж с к и й р а й о н . (14)</b>											
Астраханская обл.	38,6	97,2	6,9	20,8	25,2	40,8	46,1	38,9	5,7	7,4	4,3
Волгоградская обл. (16)	37,0	89,6	8,4	22,1	25,3	34,6	36,6	34,1	8,4	11,1	6,9
г. Куйбышев	43,1	102,1	12,2	16,5	30,7	32,2	34,8	31,8	8,6	10,4	7,6
Куйбышевская обл. (18)	38,3	91,3	10,4	18,3	24,5	29,1	30,5	28,9	7,7	10,0	6,4
Пензенская обл. (20)	27,5	65,5	7,7	16,4	19,4	24,7	28,1	23,5	7,3	10,0	5,8
Саратовская обл.	36,0	87,8	9,1	22,5	27,0	31,1	33,3	30,5	11,7	15,3	9,5
Ульяновская обл.	24,5	60,7	6,0	12,0	21,4	27,4	29,9	26,6	9,0	10,2	8,2
Башкирская АССР (22)	25,5	60,9	7,8	16,2	16,8	16,5	17,3	16,2	8,1	11,2	6,5
Калмыцкая АССР	34,6	72,4	10,2	25,0	18,6	17,5	17,3	17,6	7,3	11,5	3,5
Татарская АССР (24)	24,4	62,1	6,5	15,9	20,3	13,9	14,7	13,7	7,4	10,0	5,9
<b>С е в е р о - К а в к а з с к и й</b> район. (25)											
Краснодарский край (26)	29,5	66,9	8,8	22,2	24,7	44,6	45,4	44,9	9,0	11,8	7,3
Ставропольский край (28)	33,4	74,5	9,9	20,0	24,5	43,6	43,9	44,0	8,7	11,6	6,8
Ростовская обл.	33,6	76,8	9,6	23,0	27,0	36,9	41,2	35,7	8,7	10,8	7,1
Дагестанская АССР	15,3	34,4	3,3	9,6	12,2	21,3	38,6	20,9	4,2	6,5	2,6

Key:

1. Volga-Vyatka region
2. Gorkiy City
3. Gorkiy Oblast
4. Kirov Oblast
5. Mari ASSR
6. Mordovian ASSR
7. Chuvash ASSR
8. Central black-earth region
9. Belgorod Oblast
10. Voronezh Oblast
11. Kursk Oblast
12. Lipetsk Oblast
13. Tambov Oblast
14. Volga region
15. Astrakhan Oblast
16. Volgograd Oblast
17. Kuibyshev Oblast
18. Kuibyshev Oblast
19. Penza Oblast
20. Saratov Oblast
21. Ulyanovsk Oblast
22. Bashkir ASSR
23. Kalmyk ASSR
24. Tatar ASSR
25. Northern Caucasus region
26. Krasnoyarsk Kray
27. Stavropol Kray
28. Rostov Oblast
29. Dagestan ASSR

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12
Кабардино-Балкарская АССР (1)	31,6	71,4	8,2	16,2	23,6	37,1	38,4	36,3	9,5	12,1	7,8
Северо-Осетинская АССР	24,5	48,9	10,6	21,7	31,7	32,1	35,1	29,3	11,7	14,9	9,9
Чечено-Ингушская АССР (3)	24,5	51,6	5,9	19,7	44,8	83,7	104,4	70,3	5,0	7,1	3,2
<b>Уральский район:</b>											
Курганская обл. (5)	36,8	90,6	10,5	33,2	17,6	26,8	26,9	26,3	9,0	11,4	7,3
Оренбургская обл.	32,0	78,9	7,8	17,2	21,5	36,4	36,9	33,6	7,9	9,6	6,6
Пермская обл. (7)	28,6	69,0	8,9	25,9	19,5	16,4	18,7	15,7	7,7	9,8	6,4
г. Свердловск	34,1	80,9	11,5	23,1	31,3	13,6	14,8	13,2	12,2	15,9	10,5
Свердловская обл. (9)	37,8	92,2	10,9	28,1	25,7	16,5	17,0	16,7	8,7	11,9	7,2
г. Челябинск	40,2	92,1	12,9	24,1	29,6	45,0	44,0	45,8	7,2	8,3	6,5
Челябинская обл. (11)	39,6	92,2	11,6	23,0	23,2	32,9	34,2	32,5	7,6	9,7	6,1
Удмуртская АССР	22,1	60,5	5,4	22,6	16,2	19,2	21,1	18,9	7,1	9,0	5,7
<b>Западно-Сибирский район:</b>											
Алтайский край	37,5	89,4	10,7	26,7	20,1	26,4	28,1	26,3	9,4	12,7	7,8
Кемеровская обл. (15)	33,3	73,5	10,3	27,8	24,8	22,6	26,4	21,5	10,1	13,2	7,9
г. Новосибирск	33,0	80,6	9,4	22,6	30,2	26,1	26,4	26,3	10,6	15,4	8,0
Новосибирская обл. (17)	32,3	75,8	9,8	24,4	23,9	22,1	25,7	22,0	9,5	12,8	7,8
г. Омск	36,4	90,8	9,3	19,3	29,0	22,1	19,9	23,3	10,8	14,8	8,7
Омская обл. (19)	33,2	81,1	8,5	22,2	25,4	20,6	21,0	20,6	10,2	14,2	7,9
Томская обл.	24,5	60,6	4,4	25,6	22,1	18,7	18,3	18,8	8,1	9,2	6,6
Тюменская обл. (21)	32,3	76,8	9,5	26,8	17,1	16,4	21,7	14,2	7,9	10,2	6,6
<b>Восточно-Сибирский район:</b> (22)											
Красноярский край	33,6	74,9	11,0	24,8	21,4	17,1	18,7	16,3	10,4	13,2	8,8
Иркутская обл. (24)	34,9	76,6	10,7	25,7	24,2	19,7	21,1	19,1	10,3	12,0	9,2
Читинская обл.	34,8	68,8	14,4	34,7	22,3	20,6	20,5	20,9	5,5	6,5	4,4
Бурятская АССР (26)	40,5	84,0	15,3	27,5	20,1	13,4	16,6	11,9	7,5	8,6	6,0
Тувинская АССР	44,3	80,3	17,1	26,1	12,9	17,3	15,4	18,1	1,3	—	1,5

Key:

1. Kabardino-Balkar ASSR
2. North Ossetian ASSR
3. Chechen-Ingush ASSR
4. Urals region
5. Kurgan Oblast
6. Orenburg Oblast
7. Perm Oblast
8. Sverdlovsk City
9. Sverdlovsk Oblast
10. Chelyabinsk City
11. Chelyabinsk Oblast
12. Udmurt ASSR
13. Western Siberian region
14. Altai Kray
15. Kemerovo Oblast
16. Novosibirsk Obl.
17. Novosibirsk City
18. Omsk City
19. Omsk Oblast
20. Tomsk Oblast
21. Tyumen Oblast
22. Eastern Siberian region
23. Krasnoyarsk Kray
24. Irkutsk Oblast
25. Chita Oblast
26. Buryat ASSR
27. Tuva ASSR

Table 6, continued.

г	2	3	4	5	6	7	8	9	10	11	12
<b>Дальне восточный край (1)</b>											
Приморский край	44,2	84,8	18,5	25,1	26,6	28,9	34,1	26,6	7,0	8,2	5,9
Хабаровский край (3)	47,1	100,1	13,8	27,8	25,2	24,3	26,9	22,8	10,9	12,0	9,9
Амурская обл. (5)	33,9	67,6	11,0	25,2	23,9	17,8	20,3	16,3	9,3	12,9	6,4
Камчатская обл. (5)	48,0	106,4	8,9	19,9	20,6	19,0	14,5	19,3	5,8	5,9	4,9
Магаданская обл. (7)	62,0	117,3	17,2	24,8	24,7	10,9	12,5	9,2	3,8	3,9	3,8
Сахалинская обл. (7)	48,0	110,8	11,8	19,1	22,7	18,3	19,1	18,2	11,2	15,5	7,1
Якутская АССР	33,6	58,7	24,4	16,4	12,2	3,9	3,8	4,0	5,3	4,7	5,4
УКРАИНСКАЯ ССР (9)	29,2	64,1	9,6	19,3	25,3	23,0	23,1	22,9	10,2	13,4	8,4
<b>Донецкий Приднепровский край (10)</b>											
г. Днепропетровск (11)	34,0	71,5	12,0	14,7	35,3	30,0	36,7	26,2	10,4	13,4	8,3
Днепропетровская обл.	36,3	82,3	10,4	18,1	27,9	27,8	32,9	25,2	11,6	15,6	9,3
г. Донецк (13)	34,4	76,1	11,7	18,3	28,6	14,6	16,6	13,9	5,1	6,2	4,1
Донецкая обл.	35,1	77,9	11,3	19,6	26,5	23,9	26,6	22,5	7,3	10,2	5,6
Запорожская обл. (15)	35,5	81,5	9,8	18,3	26,2	30,2	37,1	26,9	5,2	7,3	4,0
Кировоградская обл.	34,9	81,6	10,3	18,9	22,9	29,6	35,8	26,8	10,2	13,0	8,7
Ворошиловградская обл. (17)	31,3	69,8	10,2	24,5	26,4	25,8	29,0	24,6	8,0	10,8	6,1
Полтавская обл.	26,6	60,2	9,6	16,7	21,9	23,4	27,0	21,8	11,2	15,8	8,7
Сумская обл. (19)	21,3	50,2	6,0	17,3	19,6	26,0	27,6	25,6	10,3	11,7	9,5
г. Харьков	29,2	61,4	11,6	15,5	43,4	24,0	26,2	23,0	13,5	18,2	10,5
Харьковская обл. (21)	25,8	56,2	9,2	17,2	33,1	21,8	25,1	20,5	10,7	14,4	8,3
<b>Юго-Западный (22) край</b>											
Винницкая обл. (23)	25,8	56,1	10,1	15,4	21,9	25,6	30,8	23,4	11,0	13,5	9,3
Волынская обл. (25)	16,8	34,7	4,8	20,7	20,6	14,5	15,4	13,9	10,5	13,3	8,1
Житомирская обл.	24,6	49,5	10,3	19,4	19,1	19,8	21,3	19,5	9,3	11,5	8,4
Закарпатская обл.	22,3	48,0	6,1	19,1	21,0	23,7	25,2	22,6	11,0	15,0	7,4
Ивано-Франковская обл. (27)	27,2	52,5	11,0	20,5	17,8	19,9	21,3	19,0	11,3	15,3	7,8

Key:

1. Far Eastern Region
2. Maritime Kray
3. Khabarovsk Kray
4. Amur Oblast
5. Kamchatka
6. Magadan Oblast
7. Sakhalin Oblast
8. Yakutsk ASSR
9. Ukrainian SSR
10. Donets-Dniepr region
11. Dnepropetrovsk
12. Dnepropetrovsk Oblast
13. Donetsk City
14. Donetsk Oblast
15. Zaporozhye Obl.
16. Kirovograd Obl.
17. Voroshilovgrad
18. Poltava Oblast
19. Sumy Oblast
20. Kharkov City
21. Kharkov Oblast
22. Southwestern region
23. Vinnitsa Oblast
24. Volyn Oblast
25. Zhitomir Oblast
26. Transcarpathian Oblast
27. Ivano-Frankovsk Oblast

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12
г. Киев (1)	31,0	51,2	12,7	16,0	49,2	30,6	35,7	27,9	16,3	22,3	13,3
Киевская обл.	27,7	60,6	10,6	21,1	24,2	23,3	27,2	21,5	9,8	11,9	8,5
г. Львов (3)	29,9	62,0	9,5	27,9	31,8	26,3	30,7	23,7	10,2	13,2	7,8
Львовская обл. (5)	22,9	48,4	6,2	24,6	19,3	18,3	18,5	9,2	11,7	7,2	10,6
Ровенская обл. (5)	18,0	33,7	6,7	18,6	19,1	16,9	19,1	15,3	12,7	15,5	8,6
Тернопольская обл. (7)	25,0	53,4	7,6	17,0	19,6	19,9	22,8	18,3	11,4	15,3	14,1
Хмельницкая обл. (7)	23,2	53,7	6,7	17,1	18,2	16,8	19,6	15,7	11,2	10,7	9,5
Черкасская обл. (9)	25,8	59,2	8,9	18,9	21,1	22,2	24,0	21,3	9,1	8,0	7,4
Черниговская обл. (9)	20,0	47,1	6,7	14,9	17,8	8,8	11,7	7,0	8,7	10,9	9,9
Черновицкая обл.	26,5	54,0	7,7	23,6	20,9	23,3	22,4	23,8	11,4	13,8	
Южный район (11)											
Крымская обл.	32,8	73,6	10,6	16,3	24,8	33,0	41,0	34,3	11,4	13,6	
Николаевская обл. (13)	39,0	88,8	9,6	22,5	23,9	35,1	40,3	32,6	8,3	9,3	7,4
г. Одесса	39,9	80,7	15,7	18,5	53,2	38,3	47,3	33,6	15,2	20,1	12,1
Одесская обл. (15)	33,0	68,8	11,0	20,8	36,6	27,5	34,0	24,0	12,9	16,9	10,2
Херсонская обл.	42,9	97,2	12,7	17,5	26,3	38,0	44,7	35,2	12,9	19,6	8,7
БЕЛОРУССКАЯ ССР (17)											
г. Минск	20,0	43,2	5,3	14,8	20,6	19,5	20,3	19,4	9,2	12,0	7,4
Брестская обл. (19)	32,6	64,0	11,8	17,6	40,5	34,3	36,9	34,5	14,9	20,7	10,9
Витебская обл. (21)	18,1	37,5	5,0	14,0	18,6	19,4	18,4	20,1	9,8	11,1	8,9
Гомельская обл. (21)	21,1	50,3	5,1	12,6	18,1	16,0	18,6	15,1	8,6	11,4	6,4
Гродненская обл. (23)	16,2	39,4	3,6	17,2	20,1	23,2	25,1	22,6	10,0	10,0	6,3
Минская обл. (23)	17,0	35,6	4,6	15,1	18,9	14,9	14,3	8,7	11,0	7,1	
Могилевская обл.	19,8	45,1	4,7	14,0	16,7	15,0	15,6	14,8	8,3	10,4	7,0
МОЛДАВСКАЯ ССР (25)											
г. Кишинев (26)	22,1	41,9	8,2	23,9	22,0	24,5	25,5	24,0	9,5	10,7	8,4
Прибалтийский р-н:											
Калининградская обл. (28)	36,7	92,1	8,8	25,0	24,8	20,9	22,7	20,6	10,3	9,0	10,5
Литовская ССР	29,8	61,8	8,6	18,4	23,8	19,4	19,8	19,1	12,1	14,6	10,2
г. Вильнюс (30)	26,4	59,5	7,0	11,7	32,6	22,9	25,5	22,2	9,8	12,1	7,8

Key:

1. Kiev City
2. Kiev Oblast
3. Lvov City
4. Lvov Oblast
5. Rovno Oblast
6. Ternopol Oblast
7. Khmelnitskiy Oblast
8. Cherkassy Oblast
9. Chernigov Oblast
10. Chernovitsy Oblast
11. Southern region
12. Crimean Oblast
13. Nikolayev Oblast
14. Odessa City
15. Odessa Oblast
16. Kherson Oblast
17. Belorussian SSR
18. Minsk City
19. Brest Oblast
20. Vitebsk Oblast
21. Gomel Oblast
22. Grodno Oblast
23. Minsk Oblast
24. Mogilev Oblast
25. Moldavian SSR
26. Kishinev
27. Baltic region
28. Kaliningrad Oblast
29. Lithuanian Oblast
30. Vilnius City

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12
ЛАТВИЙСКАЯ ССР (1)	25,2	57,8	5,9	17,7	23,7	20,0	22,4	19,5	12,0	14,3	10,4
г. Рига (2)	25,6	60,6	6,4	20,7	34,0	22,4	25,4	21,2	16,2	20,7	13,2
ЭСТОНСКАЯ ССР (3)	30,9	71,2	7,9	15,4	33,4	24,6	24,6	24,8	14,1	18,5	11,4
г. Таллин (4)	32,5	79,0	9,4	11,6	43,6	24,5	29,7	22,5	17,7	25,4	12,8
ЗАКАВКАЗСКИЙ (5) район:											
ГРУЗИНСКАЯ ССР (6)	12,9	26,3	4,1	13,0	25,4	13,6	15,1	12,8	5,1	6,6	4,0
г. Тбилиси (7)	15,1	29,8	5,9	14,2	37,8	11,6	11,7	11,3	6,1	7,1	5,3
АЗЕРБАЙДЖАНСКАЯ ССР	19,7	40,4	6,1	12,2	20,0	14,8	18,5	12,4	9,1	12,6	6,3
г. Баку (9)	29,6	65,0	8,7	15,8	37,8	24,0	30,4	20,3	7,9	11,0	5,9
АРМЯНСКАЯ ССР (10)	20,7	39,1	7,6	21,1	29,7	17,6	19,5	16,5	12,9	16,5	10,1
г. Ереван (11)	27,0	51,0	9,2	34,5	48,7	25,0	27,5	23,3	20,6	26,3	16,0
Среднеазиатский район:											
УЗБЕКСКАЯ ССР (13)	11,2	19,9	5,1	12,0	13,3	14,0	15,6	12,7	4,1	4,9	3,3
г. Ташкент (14)	22,4	43,8	10,5	14,2	25,4	28,1	30,8	26,7	3,4	4,5	2,1
Андижанская обл. (15)	11,6	21,8	4,0	9,8	8,6	7,3	7,7	6,9	2,4	2,7	2,2
Бухарская обл. (16)	8,0	14,4	3,2	9,6	8,7	9,4	11,4	7,8	5,9	6,0	5,9
Джизакская обл.	6,6	11,1	2,5	8,2	9,6	10,8	13,9	7,0	3,1	3,3	0,9
Кашкадарьянская обл. (18)	2,8	4,3	1,0	6,4	6,4	8,1	12,1	5,3	2,2	3,1	0,9
Наманганская обл.	6,9	11,7	3,1	9,1	7,0	5,6	7,6	3,9	5,1	5,4	4,0
Самаркандская обл. (20)	7,2	11,0	4,5	9,3	12,6	17,0	17,1	4,5	4,7	4,1	
Сурхандарьянская обл. (21)	2,6	3,8	0,8	10,0	8,6	12,0	20,1	5,6	5,3	5,6	4,3
Сырдарьинская обл. (22)	8,8	16,4	3,7	12,4	13,9	15,6	19,9	11,6	1,8	1,6	2,0
Ташкентская обл.	17,2	33,3	6,0	15,7	18,6	15,6	15,2	15,8	3,4	5,0	2,3

Key:

1. Latvian SSR
2. Riga City
3. Estonian SSR
4. Tallinn
5. Transcaucasian region
6. Georgian SSR
7. Tbilisi City
8. Azerbaijan SSR
9. Baku City
10. Armenian SSR
11. Erevan
12. Central Asian region
13. Uzbek SSR
14. Tashkent City
15. Andizhan Oblast
16. Bukhara Oblast
17. Dzhizak Oblast
18. Kashka-Darya Oblast
19. Namangan Oblast
20. Samarkand Oblast
21. Surkhan-Darya Obl.
22. Syr-Darya Oblast
23. Tashkent Oblast

Table 6, continued.

1	2	3	4	5	6	7	8	9	10	11	12
Ферганская обл. (1)	10,2	19,9	3,5	10,4	10,2	12,8	14,8	10,9	2,3	2,9	1,9
Хорезмская обл.	6,3	8,4	3,7	13,1	7,1	5,5	6,8	8,3	8,8	7,6	7,6
Каракалпакская АССР (3)	7,2	10,2	4,1	17,8	5,0	8,4	11,1	5,9	4,6	5,2	3,2
КИРГИЗСКАЯ ССР (4)	19,0	39,6	5,6	21,3	16,2	21,8	22,6	21,2	5,9	6,8	5,2
г. Фрунзе (5)	33,0	73,6	9,9	22,6	29,6	46,6	50,6	45,4	8,4	8,4	8,5
ТАДЖИКСКАЯ ССР (6)	10,2	18,0	4,1	11,1	12,4	24,1	24,1	24,1	3,8	5,4	2,3
г. Душанбе (7)	28,1	56,9	10,7	20,9	31,1	72,3	70,2	73,7	5,5	7,7	2,6
ТУРКМЕНСКАЯ ССР (8)	11,9	21,9	4,7	15,9	12,4	16,8	19,3	14,9	6,7	8,1	5,4
г. Ашхабад (9)	21,1	47,7	6,8	21,1	26,6	31,5	45,6	23,0	9,1	7,1	10,0
КАЗАХСКАЯ ССР (10)	34,7	67,7	11,3	27,5	21,1	27,5	26,3	28,6	6,0	7,6	4,8
г. Алма-Ата (11)	23,5	51,3	8,4	14,4	26,5	32,0	39,2	23,6	2,7	3,4	1,6
Актюбинская обл.	28,1	57,7	7,6	21,7	16,6	17,0	22,0	13,2	5,6	8,0	3,7
Алма-Атинская обл. (13)	28,6	58,0	8,2	26,6	18,7	25,0	23,6	25,6	5,2	5,0	5,1
Восточно-Казахстанская обл.	32,6	72,0	9,2	20,3	18,4	41,6	41,6	42,0	8,4	10,9	7,0
Гурьевская обл. (15)	26,4	57,9	8,2	14,4	10,4	4,3	4,3	4,4	4,7	4,8	4,7
Джамбульская обл.	23,8	45,8	9,3	19,9	15,7	18,7	20,4	17,8	3,0	3,9	1,6
Джезказганская обл. (17)	35,0	76,3	8,2	24,7	16,8	12,1	12,1	12,2	4,0	6,2	0,4
Карагандинская обл.	31,9	67,9	11,3	22,7	25,8	44,6	47,9	43,1	5,6	7,3	4,1
Кызыл-Ординская обл. (19)	13,0	25,2	4,3	16,8	6,8	6,9	7,2	5,4	4,5	4,7	3,7
Кокчетавская обл.	26,6	56,9	7,3	26,4	17,4	17,0	16,8	17,2	10,8	14,8	7,9
Кустанайская обл. (21)	42,3	93,6	12,6	23,5	18,1	19,0	20,8	17,4	7,2	10,2	5,3
Мангышлакская обл.	9,5	13,3	3,2	12,3	5,9	1,7	—	3,5	1,1	1,1	—
Павлодарская обл. (23)	33,9	75,2	9,4	20,5	18,1	14,5	11,7	16,3	2,1	2,3	1,7
Северо-Казахстанская обл.	36,3	88,7	6,8	24,3	21,4	20,9	21,7	20,6	7,8	9,7	5,0
Семипалатинская обл. (25)	31,4	67,8	7,7	21,4	17,7	20,7	20,2	21,3	1,7	2,4	1,0
Талды-Курганская обл.	22,4	45,6	7,1	22,7	14,9	26,6	26,5	26,9	3,6	5,9	1,8
Тургайская обл. (27)	29,0	62,1	6,2	22,2	12,2	5,0	5,1	3,5	3,4	3,6	3,1
Уральская обл.	26,2	66,6	4,4	15,1	15,0	16,4	18,6	15,1	2,6	3,1	2,0
Чимкентская обл. (29)	15,2	29,7	5,6	15,6	12,0	18,4	20,2	17,9	4,6	5,9	3,6
Целиноградская обл.	31,6	66,6	9,7	21,5	13,2	19,0	17,9	19,2	3,8	5,6	1,9

Key:

1. Fergana Oblast
2. Khorezm Oblast
3. Kara-Kalpak ASSR
4. Kirghiz SSR
5. Frunze City
6. Tajik SSR
7. Dushanbe City
8. Turkmen SSR
9. Ashkhabad
10. Kazakh SSR
11. Alma-Ata
12. Aktyubinsk Oblast
13. Alma-Ata Oblast
14. East Kazakhstan Oblast
15. Guryev Oblast
16. Dzhambul
17. Dzhezkazgan Obl.
18. Karaganda Oblast
19. Kzyly-Orda Oblast
20. Kokchetav Oblast
21. Kustanay Oblast
22. Mangyshlak Obl.
23. Pavlodar Oblast
24. North Kazakhstan Oblast
25. Semipalatinsk Obl.
26. Taldy-Kurgan Obl.
27. Turgay Oblast
28. Uralsk Oblast
29. Chinkent Oblast
30. Tselinograd Oblast

Malignant tumors of the lip comprised 2.6% (1980) in the structure of the malignant-neoplasm morbidity of the USSR population, or 14,200 new cases of the disease recorded annually. During the period from 1970 to 1980, the lip-cancer morbidity of the USSR population declined by 11.5%, while the frequency of this parameter declined by 21.5% for males and by 17.7% for females, taking into account the aging of the population. In spite of the difference in the parameters of lip-cancer morbidity existing with respect to individual nations, there is a clear 6- to 20-fold predominance of lip-cancer incidence in males relative to females. For the USSR, this difference comprised 3.6-fold for gross parameters and 6.8-fold for standardized.

In the course of the entire period under examination, a 1.5-fold increase was noted in the parameters of lip-cancer morbidity of the rural population over analogous parameters for city residents; moreover, this difference increased in recent years.

An analysis of age-sex parameters testifies to the overall maintenance of age differences in the parameters of lip-cancer morbidity of the USSR population. The dynamics of the age parameters for both males and females had a single directionality--decline, which was quite steady. Ignoring the first age group, in which the magnitude of morbidity was measured in tenth fractions, there should first be noted the decline in lip-cancer morbidity during the period from 1970 to 1980 (by 2.6-fold in males of 30-39 years of age and by 6-fold in females). A reduction in the rates of decline in the parameters was noted in the older age groups.

With respect to union republics, an overall decline in the examined parameters was also noted, except for the Moldavian SSR, which during the last 10 years had a steady growth in the lip-cancer morbidity of the population. In the Armenian SSR, the lip-cancer morbidity of the population remained at the level of 1970 (2.2°/oooo).

Cancer of the esophagus was also among the malignant-neoplasm groups with a tendency for decline in the frequency of incidence. By 1980, the relative significance of esophageal cancer in the structure of the oncologic morbidity of the USSR population had declined to 3.1% (from 4.1% in 1970).

The absolute number of newly-recorded cases of malignant esophageal tumors comprised 17,000 in 1980. The magnitude of this parameter declined by 12.2% during the last decade, although, during the last three years the intensive parameter maintained its magnitude (6.4°/oooo). Higher levels of esophageal cancer morbidity were characteristic of the inhabitants of rural area (7.8°/oooo against 5.6°/oooo for the city population). Furthermore, whereas during the entire period of decline was noted in the frequency of esophageal cancer for the city residents (this decline comprised 16.5%), esophageal cancer morbidity declined by only 3.7% for the rural population, and an increase in the parameter was observed during the last year.

An analysis of the dynamics of the age parameters of esophageal cancer morbidity of the USSR population testifies to a decline in the frequency of esophageal cancer for all age groups in both males and females with a maintenance of

higher analogous parameters for males. A decline in the frequency of esophageal cancer during the last 10 years was characteristic of males and females in gross and standardized parameters. Males got esophageal cancer 1.5-fold more frequently than females in terms of the typical parameter and 2.6-fold more frequently in terms of the standardized parameter; moreover, the difference between the levels of esophageal cancer morbidity of males and females increased during the last decade.

The all-union trend of a decline in the frequency of appearance of esophageal cancer was seen in the majority of the union republics, except for the Ukrainian, Lithuanian, Latvian and Turkmen SSR's. It is more important to note the difference in the gross parameter of esophageal cancer morbidity maintained between republics: low parameters in the Moldavian and Georgian SSR's (less than 2°/oooo) and extremely high levels in the Kazakh SSR (20.3°/oooo) and Turkmen SSR (30.5°/oooo) [9].

The mortality of the USSR population from malignant neoplasia of the esophagus declined during the period from 1970 to 1980 from 64.4°/oooo to 5.7°/oooo or by 10.9%, i.e., the rates of decline in esophageal cancer mortality of the USSR population surpassed the rates of decline in morbidity.

Stomach cancer maintained first place in the structure of oncologic morbidity of the USSR population, although its relative significance among other malignant tumors declined from 23.9 in 1970 to 18% in 1980, while the gross intensive parameter declined from 42.3 to 36.9°/oooo. The higher levels of stomach-cancer morbidity of the city population were maintained (38.6°/oooo against 33.8°/oooo in the rural district); however, the parameter had a uniform trend towards decline. An appreciable decline in the stomach-cancer morbidity of the USSR was noted during the last 10 years for all age-sex groups, which led to a decline in gross and standardized parameters by 8.2 and 17.8%, respectively, in males and by 18.3 and 27.4% in females. During the 1970's, the mean-union trend was characteristic for the overwhelming majority of union republics. Only in the Ukrainian and Moldavian SSR's was there noted an increase in the stomach-cancer morbidity of the population from 34.8 to 35.5°/oooo and from 15.5 to 17.6°/oooo, respectively; i.e., the magnitude of the age parameters of stomach-cancer morbidity in the indicated republics were lower than the mean-union level. The high parameters of stomach-cancer morbidity of the population were maintained as before at 45.5°/oooo in the RSFSR, 40.2 in the BSSR, 39.7 in the ESSR and 39.4 in the LiSSR, while the minimum parameters were maintained at 10.6 in the Uzbek SSR, 11.0 in the Georgian SSR and 11.2°/oooo in the Tajik SSR.

The stomach-cancer mortality of the USSR population has maintained a trend for decline for more than 20 years. During the last 10 years alone the stomach-cancer mortality of the USSR population declined from 40.7 to 33.3°/oooo, or by 18.2%.

Stomach cancer remained the primary cause of death in the USSR population from malignant tumor; however, even here its fraction declined from 32% in 1970 to 23.8% in 1980.

Cancer of the rectum. The rectal-cancer morbidity of the USSR population increased by 66.7% during the last 10 years and reached 8.0°/oooo in 1980.

Rectal cancer during all recent years occupied first place with respect to the rates of increase in morbidity among tumors with a tendency for increase in parameters. A higher level of rectal-cancer morbidity of the population was maintained for city residents during the entire period under examination, although an intensive increase in morbidity was noted for the city and rural districts. All age-sex indicators increased, but the greatest increase in the rectal-cancer morbidity of the population was noted in the age groups 60-69 and 70 years and older, which resulted in intensive increase during the decade in the gross and standardized parameters by 75.0 and 66.0%, respectively, for males and by 58.2 and 41.9% for females. The parameters of rectal-cancer morbidity of the population increased in all the union republics, except in the Turkmen SSR, where from 30 to 60 new cases of illness were recorded per year. Significant differences in the levels of the parameters also were maintained. Thus, the number of rectal-cancer illnesses comprised from 12.5 to 8.5°/oooo in the Baltic republics, the RSFSR and BSSR, while 2 and fewer cases were annually recorded per 100,000 residents in the Uzbek, Tajik and Turkmen SSR's.

The parameter of rectal-cancer mortality of the USSR population increased by 68.4% during the period of 1970 to 1980 and reached 6/4°/oooo.

Cancer of the larynx increased during the 10 years by 21.4% and in 1980 comprised 3.4°/oooo of the structure of malignant neoplasm morbidity of the USSR population. Throughout the examined period, malignant tumors of the larynx were more frequently recorded in the city, but the trend for increase in morbidity was characteristic of the city and rural population. Cancer of the larynx was recorded 15-fold more frequently among USSR males than among females in terms of gross parameters and 26-fold more frequently in terms of the standardized coefficients. The larynx-cancer morbidity of women was maintained at a level of 0.5°/oooo during the last five years.

An increase was noted during the last decade in cancer of the larynx in most union republics, with the exception of the Uzbek, Georgian and Lithuanian SSR's, where the frequency of larynx tumors among the population declined. In the Kirghiz SSR, the larynx-cancer morbidity of the population was maintained at a level of 1.6°/oooo during the entire period. The maximum levels of larynx-cancer morbidity of the population were noted in the republics of the Soviet Baltic region, the RSFSR and UkSSR (4°/oooo and more), and the minimum (less than 2/0°/oooo), in the Uzbek, Kirghiz and Tajik SSR's.

The gradually-increasing parameters of larynx-cancer mortality of the USSR population reached 2/6°/oooo by 1980.

Lung cancer. During the period from 1970 to 1980, the absolute number in the USSR of first-time patients with lung cancer increased from 50,400 to 77,900 people. The intensive and extensive parameters increased. The frequency of lung cancer among the population increased by 41.3%, the morbidity parameter comprised 29/4°/oooo by 1980, while the relative significance of lung cancer reached 14.3%, against 11.7% in 1970.

The situation that has developed with respect to lung cancer has often attracted the attention of oncologists in the search for means of primary prophylaxis, early diagnosis and effective methods of treatment. With this purpose, a Plenum of the Board of the All-Union Society of Oncologists was held in June 1981 at Rostov-na-Donu [30].

The lung-cancer morbidity of the USSR population increased in the city and rural districts. In spite of the higher parameters of lung-cancer frequency among the city residents relative to the rural population (31.4 against 25.9°/oooo in 1980), the lung-cancer morbidity of the population increased 1.5-fold more rapidly in the rural district.

It should be stressed that the increase in the level of the lung-cancer morbidity of the USSR population occurred almost entirely at the expense of the male population. Thus, the gross and standardized parameters of lung-cancer morbidity in males increased by 43.5 and 27.3%, respectively, and the magnitudes of the parameters comprised 51.1 and 55.0°/oooo by 1980; whereas in females the morbidity increase comprised respectively 27.2 and 16.4%, and the standardized coefficients in 1980 were maintained at the 1975 level (7.1°/oooo). In evaluating the rate of growth in lung-cancer morbidity of males and females, one should bear in mind the relatively small magnitude of the absolute value of the 1% parameter for females (7.7-fold smaller than in males).

An analysis of age parameters confirms the demonstrated trend. During the period from 1970 to 1980 all age parameters of lung-cancer morbidity increased in males; in females, a relatively small increase in lung-cancer morbidity was noted in the age groups of 40 years and older.

In characterizing the dynamics of lung-cancer morbidity of the population of the union republics, there can be noted a tendency for an increase in the frequency of lung cancer that is general to all republics, except for the Latvian SSR, where as a whole during the decade a slight decline occurred in the high lung-cancer morbidity of the population.

A lung-cancer morbidity of the population of above 30°/oooo was recorded in the Estonian, Lithuanian and Latvian SSR's, the RSFSR and UkrSSR, and of less than 10°/oooo, in the Tajik, Uzbek and Turkmen SSR's.

The mortality of the USSR population from lung cancer increased during the decade by 32.8% and comprised 25.0°/oooo in 1980.

Malignant neoplasia of the skin have for many years maintained third place in the structure of malignant tumors. The morbidity parameter increased by 15.9% during the past decade and comprised 23.3°/oooo in 1980.

An increase in skin-cancer morbidity was characteristic of the city and rural areas with higher levels for city residents (25.3 against 19.9°/ooo, 1980).

An increase was noted in the morbidity for malignant neoplasia of the skin among the male and female population with a large rise in the parameters for males. In males, the age coefficients of morbidity for the most part increased, except for the age group of 40-49 years (a decline by 3.1% was noted) and a stabilization of the parameter for the age group of less than 30 years. In women, with a stabilization of skin-cancer morbidity for the age of less than 30 years, a decline in the parameter was noted for the age groups of 40-49 and 50-59 years; an increase in skin-cancer morbidity was noted in the remaining age groups but was considerably smaller than in the analogous age groups in males.

The mean-union trend for increase in the skin-cancer morbidity of the population was for the most part demonstrated in the union republics, except for the Uzbek, Azerbaijan and Kirghiz SSR's. High skin-cancer morbidity parameters were maintained (above 25°/oooo) in the Estonian SSR, RSFSR, UkrSSR and the Latvian SSR, and low indicators (less than 10°/ooo), in the Uzbek, Azerbaijan and Turkmen SSR's.

The mortality of the USSR population from malignant skin tumors increased during the decade by 62.5% and comprised 1.3°/oooo in 1980.

Breast cancer moved from fifth to fourth place in the structure of malignant-neoplasm morbidity during the period from 1970 to 1980 and, in the structure of malignant-neoplasm morbidity of females, from fourth to second, yielding only to malignant neoplasia of the stomach. In many territories of the nation, breast cancer in women has been for a number of years the leading pathology of oncologic morbidity in women [10].

In 1980 the absolute number of first-time patients with breast cancer exceeded 40,000 persons (40,059), while the morbidity parameter comprised 15.1°/oooo for the entire population and 28.0 per 100,000 women.

The breast-cancer morbidity of the population increased in the city and rural districts with higher parameters for city residents (18.3 against 9.8°/oooo, 1980). In evaluating the gross and standardized parameters of the breast-cancer morbidity of females during the last 10 years, an intensive increase by 50.5 and 46%, respectively, was established in both parameters, while examination of the dynamics of the age coefficient of breast-cancer morbidity of women during the last 20 years demonstrated a doubling in the parameters for virtually all age groups.

Except for the Turkmen SSR, in no union republic was a decline observed in the breast-cancer morbidity of the population.

The maximum levels of breast-cancer morbidity of the population (above 15°/oooo) were recorded (1980) in the Estonian, Latvian and Lithuanian SSR's, the UkrSSR and RSFSR, and the minimum (less than 5°/oooo), in the Turkmen, Tajik and Uzbek SSR's.

During the period from 1970 to 1980, the mortality of the USSR population from breast cancer increased by 49%, while the magnitude of the parameter comprised 7.6°/oooo in 1980.

Cancer of the uterine cervix was among the malignant neoplasms that maintained a trend for decline in morbidity. The frequency of uterine cervical cancer among the nation's population declined by 18.6% during the period of the 1970's and comprised 11.4°/oooo by 1980.

The level of uterine cervical-cancer morbidity was not appreciably different between city and rural areas.

An analysis of the age parameter of uterine cervical-cancer morbidity of women in the USSR showed that at the age of less than 30 years the 1970 level of morbidity was virtually maintained in 1980. An appreciable decline in morbidity was observed in the age groups of 30-39, 40-49 and 50-59. In subsequent ages, a gradual increase in the frequency of uterine cervical cancer was noted during the last decade. As a result, the gross and standardized parameters of uterine cervical-cancer morbidity of women declined by 18.5 and 24.3%, respectively, from 1970 to 1980 and comprised 21.2 and 16.2°/oooo by the end of the period. A decline in the uterine cervical-cancer morbidity of the population was also noted in the overwhelming majority of union republics. A negligible increase in this indicator occurred in the BSSR and Armenian SSR. Appreciable differences were maintained in the levels of morbidity during the entire period. The highest parameters of uterine cervical cancer of the population (above 10°/oooo) were recorded in the UkrSSR, RSFSR and the Latvian, Moldavian, Lithuanian and Estonian SSR's, and the lowest (less than 5°/oooo), in the Tajik, Uzbek, Georgian and Turkmen SSR's, while, per 100,000 women, the parameters of cervical-cancer morbidity among women in these same republics comprised respectively 25.2, 23.5, 22.0, 22.1 and 21.8, and 7.0, 11.9 and 9.6.

The mortality among the USSR population from uterine cervical cancer declined by 8.0% during the period from 1970 to 1980, reaching 4.6°/oooo by the end of the period.

Malignant neoplasms of the lymphatic and hematopoietic tissue increased by 21.9% during the period from 1970 to 1980, reaching 8.9°/oooo. Malignant neoplasms of this group maintained their sixth place in the overall structure of malignant-tumor morbidity of the population. As a whole, a tendency for increase in the frequency of systemic neoplasms was characteristic of city and rural residents, with higher levels for the city population (9.7 against 7.5°/oooo, 1980).

All age parameters of malignant-neoplasm morbidity of the lymphatic and hematopoietic tissues increased in males and females, which caused an increase in the gross and standardized parameters, the magnitude of which by 1980 comprised respectively 9.9 and 10.4°/oooo for males and 8.0 and 6.8°/oooo for females.

An increase was noted in the malignant-neoplasm morbidity of the lymphatic and hematopoietic tissue among the population in the majority of the union republics, except for the Uzbek, Georgian and Estonian SSR's. However, it should be noted that the maximum indicator--18.6°/oooo--for the union republics was recorded in the Estonian SSR in 1979. Appreciable differences between republics in the levels of malignant-neoplasm morbidity of the lymphatic and hematopoietic tissue were maintained during the entire period.

It is important to stress that in spite of the considerable increase during the decade in the malignant-neoplasm morbidity of the lymphatic and hematopoietic tissue among the USSR population, the mortality from this factor increased by only 14% and comprised 7.4°/oooo in 1980.

The contingents of patients with malignant neoplasms increased by 51% during the 10 years and comprised 2,225,764 persons by 1980. The intensive parameter (number of oncologic patients on record in oncologic institutions per 100,000 population) increased by 38.3% and reached 836.0°/oooo, The mean-annual rate of increase in the overall parameter of malignant-tumor incidence (prevalence) exceeded by 2.4-fold the mean-annual rate of increase in malignant-neoplasm morbidity of the nation's population (Table 7). It is important to stress that contingents were accumulated for all groups of neoplasms, with the exception of esophageal cancer, independently of the dynamics of oncologic morbidity. The magnitude of prevalence for esophageal cancer declined by 3.4%, while morbidity declined by 12.3%, i.e., the process of contingent accumulation in fact occurred here also.

Table 7. Contingents of patients with malignant neoplasms of individual sites from data of oncologic institutions

(1) Локализации	(2) (МСКБ-8) 1965 г.	Число больных злокачественными новообразованиями, состоящих на учете онкологических учреждений на конец соответствующего года			
		(4) Абсолютное число (5) на 100 000 жителей		1970 г.	1980 г.
		1970 г.	1980 г.		
1	2	3	4	5	6
Все злокачественные новообразования (6)	140—209	1 473 818	2 225 764	604,3	836,0
В том числе:(7)					
Полости рта и глотки (8)	140—149	180 280	222 812	73,9	83,7
из них:(9)	140	162 669	191 973	66,7	72,1
губы	150—159	216 719	296 534	88,8	111,4
Органов пищеварения и брюшины (11)					
из них:(9)					
пищевода (12)	150	14 458	15 073	5,9	5,7
желудка	151	144 666	161 396	59,3	60,6
прямой кишки (14)	154	24 809	53 710	10,2	20,2
(15) Органов дыхания	160—163	73 296	132 386	30,1	49,7
из них:(9)					
(16) горлани	161	23 475	43 228	9,6	16,2
трахеи, бронхов, легкого(17)	162	46 446	83 243	19,0	31,3
(18) Костей и соединительной ткани	170, 171	23 742	36 393	9,7	13,7
Кожи (19)	172, 173	399 353	610 784	163,7	229,4
Молочной железы (20)	174	129 627	234 877	53,1	88,2
(21) Мочеполовых органов	180—189	393 561	583 808	161,4	219,3
из них:(9)					
шейки матки(22)	180	260 724	338 532	106,9	127,1
(23) Других женских половых органов	181, 183, 184	45 811	73 622	18,8	27,7
(24) мочевого пузыря и других мочевых органов	188, 189	28 902	54 368	11,9	20,4
(25) Лимфатической и кроветворной ткани	200—209	30 850	62 373	12,7	23,4

Key:

1. Sites
2. MSKB-8 [not further identified]
3. Number of malignant-neoplasm patients on record of oncologic institutions at end of corresponding year
4. Absolute number
5. per 100,000 inhabitants
6. All malignant neoplasms
7. Including:
8. Buccal cavity and throat
9. of these:
10. lip
11. Organs of digestion and peritoneum
12. esophagus
13. stomach
14. rectum
15. Organs of respiration
16. larynx
17. trachea, bronchi, lung
18. Bones and connective tissue
19. Skin
20. Breast
21. Urogenital organs
22. uterine cervix
23. other female sex organs
24. urinary bladder and other urinary organs
25. Lymphatic and hematopoietic tissue

In contrast to the structure of morbidity, the structure of oncologic-patient contingents had specific features. Skin cancer was in first place, uterine cervical cancer in second and breast cancer in third; while the leading malignant-neoplasm forms in the structure of morbidity--stomach and lung cancers--were located here at the sixth and seventh places, respectively.

Table 8. Contingents of patients with malignant neoplasms (including tumors of lymphatic and hematopoietic tissue) from data of oncologic institutions of USSR and union republics

1	(1) Число больных, состоявших на учете на конец года			
	(2) абсолютное число		(3) на 100 000 жителей	
	1970 г.	1980 г.	1970 г.	1980 г.
1	2	3	4	5
СССР (4)	1 473 818	2 225 764	604,3	836,0
РСФСР	866 272	1 317 676	662,8	947,8
УССР(6)	360 130	533 068	758,2	1066,4
БССР	43 663	72 000	481,2	746,4
Узбекская CCP (8)	21 219	32 986	172,4	204,2
Казахская CCP	54 995	75 746	420,8	503,2
Грузинская CCP(10)	14 451	22 122	305,3	438,1
Азербайджанская CCP	11 206	18 642	214,7	300,7
Литовская CCP (12)	21 068	32 528	665,4	945,9
Молдавская CCP	17 215	26 715	475,7	668,3
Латвийская CCP(14)	22 411	30 852	939,1	1223,7
Киргизская CCP	10 574	16 086	352,1	441,1
Таджикская CCP(16)	5 788	8 774	193,8	218,7
Армянская CCP	7 591	12 804	298,2	409,7
Туркменская CCP(18)	4 148	6 492	186,6	223,7
Эстонская CCP	13 087	19 273	952,4	1299,4

Key:

1. Number of patients on record at year's end
2. absolute number
3. per 100,000 inhabitants
4. USSR
5. RSFSR
6. UkrSSR
7. BSSR
8. Uzbek SSR
9. Kazakh SSR
10. Georgian SSR
11. Azerbaijan SSR
12. Lithuanian SSR
13. Moldavian SSR
14. Latvian SSR
15. Kirghiz SSR
16. Tajik SSR
17. Armenian SSR
18. Turkmen SSR
19. Estonian SSR

The character of the structure of oncologic-patient contingents should to a large extent determine the tactics for the rehabilitative measures taken in the nation.

The numbers of contingents of oncologic patients increased considerably during the period from 1970 to 1980 in all union republics, while the magnitude of prevalence in three union republics exceeded 1,000°/oooo: 1,299.4°/oooo in the Estonian SSR, 1,223.7°/oooo in the Latvian SSR and 1,066.4°/oooo in the Ukrainian SSR. In two other union republic (RSFSR and Lithuanian SSR), the prevalence exceeded 900°/oooo (Table 8). Such levels of the prevalence parameter testify to the indisputable effectiveness of the measures taken and to the extensive period of high-quality work for the dispensary observation of oncologic patients that have completed special therapy.

Instructive in this respect is the Belorussian SSR, which has done extensive work for improving the recording of oncologic patients using modern computer technology. The number of oncologic-patient contingents here increased by 65% during the 1970's, and the prevalence, by 55%. At the same time, in a number of union republics (Uzbek, Tajik and Turkmen) with a low magnitude of the prevalence parameter (about 200.0°/oooo), there was also found a low mean-annual increase in this parameter (2 percent and less).

In the complex of parameters called upon to provide an objective assessment of the anticancer measures from early detection to timely and adequate treatment, a special place is occupied by one-year lethality, i.e., the ratio of the numbers of oncologic patients surviving for less than one year to the number of patients recorded in the given year with an established malignant-neoplasm diagnosis for the first time in life. For clarify, the parameter is computed in percentages. During the last three years in the USSR as a whole a decline was observed in the one-year lethality of oncologic patients from 36.0% in 1978 to 35.2% in 1980. The magnitude of this parameter exceeded 40% in a number of union republics (Azerbaijan and Turkmen SSR's) (Table 9).

Table 9. Number of patients surviving less than one year after established malignant-neoplasm diagnosis per 100 first-time diagnosed patients in 1980 (one-year lethality). System of USSR Ministry of Health

(1) Союзные республики	Все злокачественные новообразования (2) (140—209)	(3) В том числе злокачественные опухоли				
		желудка (4) (151)	трахеи, бронхов, легкого (5) (162)	мамочной железы (6) (174)	шейки матки (7) (180)	лимфатической и кро-веторной ткани (8) (200—209)
1	2	3	4	5	6	7
СССР (9)	35,2	53,9	52,2	10,3	11,6	40,3
РСФСР	36,4	54,9	52,7	10,0	11,7	41,3
УССР(11)	34,3	54,8	53,4	11,7	11,0	41,7
БССР	28,4	42,8	43,0	8,7	7,6	35,0
Узбекская ССР(13)	35,4	54,8	51,5	11,5	16,7	38,1
Казахская ССР	32,8	47,6	48,4	8,5	10,7	36,0
Грузинская ССР(15)	24,6	47,7	45,0	5,0	8,6	25,6
Азербайджанская ССР	44,6	64,4	58,0	15,5	20,9	33,1
Литовская ССР(17)	29,4	41,4	40,4	9,8	11,8	35,7
Молдавская ССР	27,4	48,3	44,7	7,4	10,5	28,6
Латвийская ССР(19)	36,7	56,2	61,3	9,3	14,1	39,7
Киргизская ССР	35,1	50,0	52,8	10,8	13,5	60,6
Таджикская ССР(21)	26,1	45,4	42,3	9,6	10,2	38,8
Армянская ССР	24,1	38,7	40,9	9,7	12,1	28,8
Туркменская ССР(23)	49,9	71,3	57,3	23,5	21,5	46,0
Эстонская ССР	39,2	60,4	59,9	13,1	14,3	40,7

Key:

1. Union republics
2. All malignant neoplasms
3. Including malignant tumors of
4. stomach
5. trachea, bronchi, lung
6. breast
7. uterine cervix
8. lymphatic and hematopoietic tissue
9. USSR
10. RSFSR
11. UkrSSR
12. BSSR
13. Uzbek SSR
14. Kazakh SSR
15. Georgian SSR
16. Azerbaijan SSR
17. Lithuanian SSR
18. Moldavian SSR
19. Latvian SSR
20. Kirghiz SSR
21. Tajik SSR
22. Armenian SSR
23. Turkmen SSR
24. Estonian SSR

The relative significance of posthumously-recorded patients with malignant neoplasms among all the patients with an established malignant-neoplasm diagnosis for the first time in life continued to decline, reaching a magnitude of 2.0% by 1980 (Table 10).

Table 10. Relative significance (in %) of posthumously-recorded patients with malignant neoplasms among all patients with established malignant-neoplasm diagnosis for first time in life

1980 г.		1980 г.	
1	2	1	2
СССР (1)	2,0	Литовская ССР (9)	0,6
РСФСР	1,4	Молдавская ССР	0,3
УССР (3)	2,9	Латвийская ССР (11)	1,6
БССР	0,7	Киргизская ССР	3,9
Узбекская ССР (5)	0,8	Таджикская ССР (13)	4,7
Казахская ССР	5,1	Армянская ССР	2,6
Грузинская ССР (7)	3,1	Туркменская ССР (15)	8,0
Азербайджанская ССР	6,1	Эстонская ССР	5,1

Key:

1. USSR	9. Lithuanian SSR
2. RSFSR	10. Moldavian SSR
3. UkrSSR	11. Latvian SSR
4. BSSR	12. Kirghiz SSR
5. Uzbek SSR	13. Tajik SSR
6. Kazakh SSR	14. Armenian SSR
7. Georgian SSR	15. Turkmen SSR
8. Azerbaijan SSR	16. Estonian SSR

Table 11. Methods for treating malignant-neoplasm patients in 1980

(1) Локализация	(2) МСКБ-8	(4) Всего	(3) Число больных, закончивших специальное лечение по поводу элокачественных новообразований						(5) в том числе лечение					
			(7) только хирургическое			(8) только лучевое			(9) дистанционная гамма-терапия			(10) контактно-контактной гамма-терапии		
			(6) абсолютное число	%	хирургическое	(9)	(10)	(11) очаговое	(12)	(13)	(14) комбинированное (хирургическое и лучевое)	(15) химио-терапевтическое	(16) комплексное	(17) про-тическое
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Злокачественные опухоли, всего (18)	140—199	343 760	100,0	28,7	8,6	16,3	6,1	1,1	9,4	3,2	1,6	13,8	11,2	0,0
В том числе детей до 14 лет, включительно: (19)	1 375	100,0	39,7	8,4	4,7	0,2	—	—	11,6	3,1	0,3	14,8	17,1	0,1
Из общего числа — опухоли: (20)	140—149	22 574	100,0	9,3	16,7	49,0	2,3	1,5	5,7	7,6	1,1	2,4	4,4	0,0
Полости рта (21)	140—149	81 380	100,0	56,1	7,3	0,8	0,7	0,1	3,0	0,6	0,3	20,7	10,4	0,0
Органов пищеварения (22)	150—159	47 259	100,0	16,6	22,2	3,2	0,3	0,3	8,0	1,2	0,5	37,5	10,1	0,1
Органов дыхания, из них: (23)	160—163	9 479	100,0	14,4	42,2	7,1	0,5	0,3	19,6	3,2	0,8	3,9	8,0	0,0
Гортани (24)	161	63 650	100,0	24,7	2,2	63,3	0,5	0,4	1,4	5,1	0,4	1,0	0,9	0,1
Кожи (25)	172, 173	38 213	100,0	18,7	4,3	1,2	0,1	0,0	29,6	7,1	0,9	6,0	32,1	0,0
Молоночной железы (26) 174	74 267	100,0	18,6	5,7	1,5	25,6	3,7	13,8	2,3	5,3	10,4	13,0	0,1	
Мочеполовых органов, из них: (27)	28 208	100,0	6,7	4,7	1,3	57,8	8,0	9,5	1,1	6,8	1,3	2,8	0,0	
Шейки матки (28)	180													

Table 11, continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
прочих женских половых органов (29)	181, 183, 184	14 239	100,0	15,0	4,7	2,3	4,7	1,2	7,7	2,0	2,6	25,5	34,2	0,1
мочевого пузыря и прочих мочевыkh органов (30)	188, 189	13 256	100,0	43,5	11,7	1,5	0,8	0,2	15,2	2,7	1,0	10,4	13,0	0,0
Мозга и других отделов нервной системы (31)	191, 192	3 430	100,0	53,5	10,7	2,9	0,2	0,2	15,6	4,8	0,4	6,4	5,3	0,0
Опухоли лимфатической и кроветворной ткани (32)	200—209	28 733	100,0	1,7	6,6	1,3	0,2	0,1	1,9	0,4	0,2	74,4	13,2	0,0
В том числе у детей до 14 лет включительно (19)		2 218	100,0	2,3	4,0	1,0	0,0	—	0,9	0,6	0,2	74,5	16,5	

## Key:

1. Sites
2. MSKB-8 [not further identified]
3. Number of patients completing special therapy for malignant neoplasms
4. total
5. including
6. absolute number
7. only surgical therapy
8. only radiation therapy
9. remote gamma therapy
10. X-ray therapy
11. combined therapy
12. contact and remote gamma therapy
13. contact gamma therapy and profound X-ray therapy
14. combined (surgical and radiation) therapy
15. chemotherapy
16. complex therapy
17. other therapies
18. Malignant tumors, total
19. Including children up to 14 years of age, inclusive
20. out of the total number--tumors of:
21. Buccal cavity
22. Digestive organs
23. Respiratory organs, of these:
24. larynx
25. Skin
26. Breast
27. Urogenital organs, of these:
28. uterine cervix
29. other female sex organs
30. urinary bladder and other urinary organs
31. Brain and other segments of nervous system
32. Tumors of lymphatic and hematopoietic tissue

Table 12. Methods for treating malignant-neoplasm patients in USSR and union republics (according to data of oncologic institutions in system of USSR Ministry of Health), 1980

(1) Число больных, закончивших специальное лечение по поводу злокачественных новообразований									
	(2) всего, общ. число			(5) только лучевые			(3) в том числе (в %)		
	(4) только хирургическое	(6) дистанционная гамма-терапия	(7) рентгено-терапия	(8) лучевое лечение	(9) конт. и дист. гамма-терапия	(10) конт. терапия и глуб. рентгено-терапия	(11) комбинированное (хирургическое и лучевое)	(12) химиотерапевтическое лечение	(13) комплексное лечение
1	2	3	4	5	6	7	8	9	10
1									

(14) Все злокачественные новообразования (140—209)

СССР (15)	372 493	26,7	8,5	15,1	5,6	1,0	8,9	3,0	18,4
РСФСР	201 577	31,1	8,5	15,3	5,9	0,9	9,7	2,7	14,9
УССР (17)	92 620	24,2	6,6	14,5	5,2	1,0	7,7	3,8	9,6
БССР	11 843	16,0	11,7	15,5	6,5	0,4	12,8	0,9	12,8
Узбекская ССР (19)	11 421	11,1	12,6	13,4	4,1	1,4	4,1	2,8	20,4
Казахская ССР	17 752	16,7	14,9	17,6	8,1	1,5	6,5	3,3	30,9
Грузинская ССР (21)	3 862	26,6	7,1	20,4	3,4	0,7	5,2	3,3	15,6
Азербайджанская ССР	5 169	13,9	8,7	15,7	0,2	3,3	4,4	5,4	21,6
Литовская ССР (23)	6 384	23,9	8,5	11,1	3,4	0,2	16,0	1,8	17,8
Молдавская ССР	5 410	23,4	4,3	12,0	3,6	1,9	3,8	0,8	27,0
Латвийская ССР (25)	4 202	29,1	4,0	13,2	5,5	0,3	11,4	1,4	21,1
Киргизская ССР	2 497	18,2	13,6	20,9	10,1	0,2	7,7	2,3	13,2
Гаджикская ССР (27)	1 403	20,2	8,6	26,3	4,9	—	5,9	2,5	32,2
Армянская ССР	2 485	15,1	6,6	21,7	3,3	2,5	12,2	8,2	12,0
Туркменская ССР (29)	2 602	10,7	14,5	12,0	4,0	0,1	2,7	0,5	46,1
Эстонская ССР	3 266	29,9	8,7	10,9	3,7	0,3	11,1	1,3	7,5

Key:

1. Number of patients completing special therapy for malignant neoplasms
2. Total, absolute number
3. including (in %)
4. only surgical therapy
5. only radiation therapies
6. remote gamma therapy
7. X-ray therapy
8. combined radiation therapy
9. contact and distant gamma therapy
10. contact therapy and profound X-ray therapy
11. combined (surgical and radiation) therapy
12. chemotherapy
13. complex therapy
14. All malignant neoplasms
15. USSR
16. RSFSR
17. UkrSSR
18. BSSR
19. Uzbek SSR
20. Kazakh SSR
21. Georgian SSR
22. Azerbaijani SSR
23. Lithuanian SSR
24. Moldavian SSR
25. Latvian SSR
26. Kirghiz SSR
27. Tajik SSR
28. Armenian SSR
29. Turkmen SSR
30. Estonian SSR

Table 12, continued.

1	2	3	4	5	6	7	8	9	10	11	12
(1) Органы пищеварения и брюшны (150—159)											
СССР (2)	81 380	56,1	7,3	0,8	0,8	0,1	3,0	0,6	0,2	20,7	10,4
РСФСР	44 691	70,2	5,9	0,6	0,2	0,0	2,6	0,2	0,2	13,5	6,6
УССР (4)	17 552	47,1	4,0	0,9	0,5	0,1	3,4	1,3	0,3	26,7	15,7
БССР		46,2	7,9	0,9	0,5	0,2	10,5	0,3	—	13,6	20,6
Узбекская ССР (6)	3 898	10,7	14,3	2,3	0,5	—	1,9	1,9	0,6	49,8	18,4
Казахская ССР	5 528	27,3	22,8	0,0	6,7	0,8	2,6	0,8	0,4	27,5	11,1
Грузинская ССР (8)	470	52,3	1,9	1,1	1,3	0,2	8,5	1,7	3,8	21,1	8,1
Азербайджанская ССР	1 380	18,6	14,0	6,2	—	0,1	2,4	0,4	0,4	36,4	21,5
Литовская ССР (10)	1 449	62,8	2,0	—	—	0,3	5,2	—	0,2	16,7	11,8
Молдавская ССР	914	41,8	1,8	0,7	—	0,1	3,0	1,6	0,2	40,6	10,2
Латвийская ССР (12)	654	67,9	3,5	0,2	—	0,2	0,9	0,2	0,2	9,5	17,4
Киргизская ССР	423	44,3	16,5	—	0,7	—	7,1	—	0,2	14,9	16,3
Таджикская ССР (14)	301	30,9	10,6	0,7	—	—	0,7	—	—	50,8	6,3
Армянская ССР	532	36,0	5,5	2,6	2,3	3,8	6,0	7,7	—	16,9	19,2
Туркменская ССР (16)	1 080	9,1	18,8	1,2	—	0,5	0,5	0,1	64,6	5,7	
Эстонская ССР	641	2,3	0,6	0,2	—	—	3,0	0,3	—	20,4	11,2
(18) Органы дыхания (160—163)											
СССР	47 259	16,6	22,2	3,2	0,3	0,3	8,0	1,2	0,5	37,6	10,1
РСФСР (3)	25 091	22,0	25,2	2,9	0,2	0,2	9,2	0,8	0,5	30,5	8,5
УССР	13 046	11,1	13,6	3,0	0,3	0,2	6,3	1,7	0,2	54,5	9,1
БССР (5)	1 186	5,1	31,4	0,6	0,1	0,2	7,5	0,5	—	16,4	38,2
Узбекская ССР	1 121	4,9	21,2	5,4	0,3	—	3,2	0,5	0,9	49,7	12,1
Казахская ССР (7)	2 490	9,0	33,3	1,6	2,6	0,8	7,1	0,6	0,0	30,0	15,0
Грузинская ССР	576	21,4	14,2	5,4	0,3	—	6,4	2,4	3,8	40,4	5,7
Азербайджанская ССР (9)	686	2,5	25,9	21,4	0,9	—	1,5	0,5	1,5	35,9	9,9
Литовская ССР	774	5,0	29,0	0,3	—	0,5	14,6	0,1	—	34,9	15,6
Молдавская ССР (11)	632	11,1	10,6	9,2	0,3	0,3	4,1	0,9	5,1	47,6	10,8
Латвийская ССР	306	43,1	6,9	0,7	0,3	—	16,3	0,3	5,9	10,5	16,0
Киргизская ССР (13)	258	17,1	55,4	—	0,4	1,2	7,8	—	—	1,5	16,6
Таджикская ССР	108	0,9	33,3	5,6	—	—	0,9	—	—	50,0	9,3
Армянская ССР (15)	345	10,1	11,9	11,6	—	3,8	8,7	12,5	3,2	27,2	11,0
Туркменская ССР	263	13,3	12,5	1,9	0,4	4,6	0,8	0,8	1,1	58,2	6,8
Эстонская ССР (17)	377	15,6	—	—	0,8	10,9	1,3	0,2	—	16,7	14,1

Key:

1. Organs of digestion and peritoneum
2. USSR
3. RSFSR
4. UkrSSR
5. BSSR
6. Uzbek SSR
7. Kazakh SSR
8. Georgian SSR
9. Azerbaijan SSR
10. Lithuanian SSR
11. Moldavian SSR
12. Latvian SSR
13. Kirghiz SSR
14. Tajik SSR
15. Armenian SSR
16. Turkmen SSR
17. Estonian SSR
18. Organs of respiration

Table 12, continued.

1	2	3	4	5	6	7	8	9	10	11	12
(1) Гортани (161).											
(18) Молочная железа (174).											
СССР (2)	38 213	18,7	4,3	1,2	0,1	0,0	29,6	7,1	0,9	6,0	32,1
РСФСР	21 135	20,8	3,1	0,8	0,2	0,0	34,0	6,4	0,7	3,8	30,2
УССР (4)	9 187	16,1	6,6	1,9	0,1	0,1	24,3	9,0	0,6	6,8	34,5
БССР	1 190	8,6	9,0	1,1	0,2	—	42,3	0,8	0,2	9,7	28,1
Узбекская ССР (6)	847	8,6	4,1	1,4	0,1	—	13,2	5,9	5,9	9,8	51,0
Казахская ССР	1 468	18,9	4,0	0,5	—	—	18,2	15,1	0,1	5,2	38,0
Грузинская ССР (8)	751	34,0	6,5	1,6	—	—	7,6	6,9	6,3	19,5	17,6
Азербайджанская ССР	512	13,3	—	7,0	—	—	10,7	6,4	—	6,3	56,3
Литовская ССР (10)	624	5,3	1,8	0,2	—	—	48,6	0,2	—	9,6	34,3
Молдавская ССР	569	26,0	4,4	3,3	0,2	—	13,4	6,7	2,6	19,8	23,4
Латвийская ССР (12)	587	19,3	2,9	0,3	—	—	34,6	1,6	0,3	15,3	25,7
Киргизская ССР (14)	262	7,3	5,3	—	—	—	3,8	—	—	—	83,6
Таджикская ССР (14)	147	21,1	10,9	—	—	—	30,0	5,4	—	16,3	16,3
Армянская ССР	329	13,2	—	0,3	—	—	32,8	30,0	2,7	0,3	20,7
Туркменская ССР (16)	177	13,6	10,7	1,0	0,6	—	26,6	0,6	5,1	32,2	9,0
Эстонская ССР	428	16,4	1,8	0,7	—	—	32,7	2,8	0,7	13,6	31,3

Key:

1. Larynx
2. USSR
3. RSFSR
4. UKSSR
5. BSSR
6. Uzbek SSR
7. Kazakh SSR
8. Georgian SSR
9. Azerbaijan SSR
10. Lithuanian SSR
11. Moldavian SSR
12. Latvian SSR
13. Kirghiz SSR
14. Tajik SSR
15. Armenian SSR
16. Turkmen SSR
17. Estonian SSR
18. Breast

Table 12, continued.

1	2	3	4	5	6	7	8	9	10	11	12
(1) Опухоли лимфатической и кроветворной ткани (200—209)											
СССР(2)	28 733	1,7	6,6	1,3	0,2	0,1	1,9	0,4	0,2	74,4	13,2
РСФСР (3)	14 626	2,0	7,6	0,8	0,1	0,1	2,2	0,2	0,3	73,2	13,5
УССР (4)	7 762	1,3	4,3	1,8	0,1	0,0	1,1	0,2	—	80,6	10,6
БССР (5)	1 506	0,7	8,0	0,2	0,1	0,4	0,4	—	—	78,4	11,8
Узбекская ССР(6)	586	0,7	7,5	5,5	0,2	3,2	3,9	3,1	—	61,3	14,5
Казахская ССР(7)	666	2,3	9,6	2,3	3,3	—	6,3	0,2	—	56,7	19,3
Грузинская ССР (8)	279	3,9	12,9	0,4	—	—	—	1,4	2,9	69,5	9,0
Азербайджанская ССР (9)	402	2,7	2,2	9,0	1,0	—	0,5	7,2	—	16,4	61,0
Литовская ССР(10)	706	0,4	7,8	0,3	—	—	3,4	0,1	0,1	78,6	9,3
Молдавская ССР(11)	798	0,6	4,8	2,5	—	—	0,3	0,1	0,9	83,0	7,8
Латвийская ССР(12)	548	—	2,2	0,2	—	0,2	0,4	—	0,2	93,2	3,6
Киргизская ССР(13)	144	1,4	20,1	—	—	—	7,6	—	0,7	22,9	47,3
Таджикская ССР (14)	77	18,2	3,9	11,6	—	—	—	2,6	3,9	48,1	11,7
Армянская ССР (15)	134	1,5	16,4	0,7	—	—	—	—	—	65,7	15,7
Туркменская ССР(16)	202	3,0	5,9	—	—	—	—	—	1,0	72,3	17,8
Эстонская ССР (17)	297	1,7	9,1	0,3	—	—	4,7	—	—	62,3	21,9

Key:

1. Tumors of lymphatic and hematopoietic tissue
2. USSR
3. RSFSR
4. UkrSSR
5. BSSR
6. Uzbek SSR
7. Kazakh SSR
8. Georgian SSR
9. Azerbaijan SSR
10. Lithuanian SSR
11. Moldavian SSR
12. Latvian SSR
13. Kirghiz SSR
14. Tajik SSR
15. Armenian SSR
16. Turkmen SSR
17. Estonian SSR

In 1980, 372,500 people in the USSR completed special therapy for malignant neoplasms or, per 100,000, more than in 1970. The relative significance of the combined and complex treatment of oncologic patients of the second clinical group increased appreciably during the decade; the use of pure chemotherapy and of the radiation method alone in the treatment of patients with tumors of the organs of digestion and respiration, the breast and of other sites declined considerably. However, even in 1980 chemotherapy as the sole method was prescribed for 20.7 and 37.5% of the number of patients of the second clinical group that completed special therapy for malignant tumors of digestive and respiratory organs, respectively; which cannot be considered as effective. These parameters were even higher in the Turkmen, Tajik, Moldavian, Georgian and Uzbek SSR's (Tables 11 and 12).

The mortality of the USSR population from malignant tumors firmly occupies second place among the causes of death. The statistics of cancer mortality of the population abroad are considerably better than is the record of morbidity. The World Health Organization publishes extensive materials in specialized annuals. In recent years on the basis of these materials, M. Segi developed and published the cancer mortality with a computation of standardized parameters. The latter data of standardized mortality parameters of the population of 40 nations were published in 1981 with respect to the situation in 1976 [13]. The absolute number of deaths in the USSR from malignant tumors increased during the decade by 20.4% and reached 371,800 people (1980). The parameter of malignant-neoplasm mortality increased during this period by 10.2% and comprised 140.0°/oooo in 1980. It should be noted that the increase in malignant-neoplasm mortality of the USSR population comprises only 2/3 of the increase in cancer morbidity during a comparable period. During the last decade the leading place in the structure of malignant-neoplasm mortality of the USSR population was maintained by cancer of the stomach and lungs and malignant tumors of the female sex organs. The mortality of the USSR population from cancer of the stomach (by 18.2%), esophagus (by 12.5%) and the uterine cervix (by 10%) declined markedly. An increase in tumor mortality was demonstrated for the remaining sites during the final period from 1970 to 1980 (Table 13).

The greatest increase in mortality of the USSR population was from rectal cancer (68.4%), breast cancer (49.0%) and malignant neoplasms of the lungs (32.8%).

During the last 10 years, considerable work has been done in the USSR to develop and strengthen the systems of the anticancer struggle. Recording and dispensary observation have been considerably improved; methods for the massive investigation of the population have been advanced with the aim of the early detection of malignant tumors and timely adequate treatment. In accordance with the decision of the CPSU 26th Congress, a further development is projected for promising directions in the specialized oncologic service.

Table 13. Mortality of USSR population from malignant neoplasms \*

(1) Локализации	(2) (МСКБ-8) 1965 г.	Абсолютное число (3) (в тыс.)		На 100 000 жителей (4)	
		1970 г.	1980 г.	1970 г.	1980 г.
1	2	3	4	5	6
Все злокачественные новообразования	140—209	308,7	371,8	127,2	140,0
В том числе: (6)					
полости рта и глотки (7)	141—149	3,9	7,0	1,6	2,6
Органов пищеварения (8)	150—159	159,3	166,6	65,6	62,8
(6) в том числе:					
пищевода (9)	150	15,4	15,0	6,4	5,7
(10) желудка	151	98,8	88,5	40,7	33,3
кишечника (11)	152, 153	10,1	16,6	4,4	6,3
(12) прямой кишки	154	9,2	17,1	3,8	6,4
Органов дыхания (13)	160—163	52,6	77,8	21,6	29,3
в том числе: (9)					
(14) горлани	161	—	7,0	—	2,6
бронхов, трахеи, легких (15)	162	47,2	68,8	19,5	25,9
(16) Костей и соединительной ткани	170, 171	3,2	4,2	1,3	1,6
Кожи (17)	172, 173	2,0	3,5	0,8	1,3
Молочной железы (18)	174	12,3	20,3	5,1	7,6
Женских половых органов (19)	180—184	28,9	32,4	11,9	12,2
в том числе: (9)					
(20) шейки матки	180	12,1	12,1	5,0	4,6
Мужских половых органов (21)	185—187	4,4	6,0	1,8	2,2
в том числе: (9)					
предстательной железы (22)	185	3,6	5,0	1,5	1,9
Мочевых органов (23)	188—189	9,8	13,2	4,0	5,0
(24) Лимфатической и кроветворной ткани	200—209	17,8	19,9	7,3	7,4
в том числе: (9)					
(25) лейкемии	204—207	9,0	11,6	3,7	4,3

\* "Zlokachestvennyye novoobrazovaniya v SSSR" [Malignant Neoplasms in the USSR], Leningrad, 1980, p 77; VESTN. STATISTIKI No 11, 1981, p 72.

Key:

1. Sites
2. (MSKB-8) [not further identified]
3. Absolute number (in thousands)
4. Per 100,000 inhabitants
5. All malignant neoplasms
6. Including:
7. buccal cavity and throat
8. Organs of digestion
9. esophagus
10. stomach
11. intestine
12. rectum
13. Organs of respiration
14. larynx
15. bronchi, trachea, lungs
16. Bones and connective tissue
17. Skin
18. Breast
19. Female sex organs
20. uterine cervix
21. Male sex organs
22. prostate gland
23. Urinary organs
24. Lymphatic and hematopoietic tissue
25. leukemia

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9942

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## REASONS FOR THE EXISTENCE OF NONSCIENTIFIC MEDICINE IN THE USSR

Moscow LITERATURNAYA GAZETA in Russian 5 Jan 83 p 15

[Article by Academician of the USSR Academy of Medical Sciences V. Zhdanov in the column "Once More on 'Doctoring'": "What Drives People to a Quack?"]

[Text] Our nation, as is known, has the most advanced health-care system. For many decades it has provided the entire population with free and qualified medical care, based on the achievements of scientific medicine and many other branches of science and technology.

But nevertheless, however paradoxical this may be, a nonscientific doctoring still exists in our nation. True, its relative importance is small or, more correctly speaking, negligible. The overwhelming majority of the population receives medical care at the polyclinics, hospitals, dispensaries, clinics and at other therapeutic-prophylactic institutions. Drugs are provided both by these institutions and by a wide network of pharmacies.

The most prominent, and a legal form of nonscientific doctoring, is homeopathy. Its principles are general phrases such as "Treat like with like," which conceals nothing of real meaning. However, contemporary homeopathy has copied something from allopathy, that is to say normal medicine, and, apparently, this fact makes it relatively vigorous.

Homeopathy is a typical parascience, whose basic feature is that it does not nourish science, although it feeds on it, repeating certain of its tenets. Homeopaths do not attempt to organize discussions, since they understand perfectly well that any, even a slightly-educated physician, can immediately throw them. Expressing itself in the language of biology, homeopathy occupies an ecological niche that is not occupied by scientific medicine. I will have more to say on the reasons for the existence of this niche.

The question arises, what is to be done about homeopathy? Should it not be prohibited? This question has been discussed more than once, and still no decision concerning the prohibition of homeopathy has been made. Probably, such a prohibition would not give the required effect, just as the legislative prohibition of abortions resulted in no such effect in its time. Apparently, the most correct path is a more effective propaganda and, also, the improvement of the medical service, which with time must fill the "ecological niche" occupied by homeopathy.

In addition to homeopaths, from time to time there appear on the horizon quacks of a different nature, also drawing to themselves a large number of patients. Sometimes they even are people with diplomas for higher or secondary medical education, but most often they are people ignorant of medicine.

I once had occasion to familiarize myself with the work of one such quack (female), today deceased, who lived in Kaluga, in the homeland of Tsiolkovskiy. This, if one may use the term, researcher "discovered" "cancer bacteria" and prepared from them a therapeutic vaccine. She was clearly weak in bacteriology; when the cultures she isolated were investigated in the laboratory of the State Scientific Research Institute imeni Tarasevich, a portion of them proved to be saprophytic staphylococci (which are readily isolated from the air); another portion--nonpathogenic enterococci. It would seem that there is nothing to worry about: killed saprophytes can hardly damage health, only cause a small abscess (if the vaccinations are made incorrectly). However, among the victims of this diplomaed quack were found cancer patients who could have been saved (or, at least, whose lives could have been prolonged) with modern surgical intervention, X-ray therapy and chemotherapy. Thus her activity was far from harmless.

Unfortunately, there came to her defense not only certain local supervisors, suffering, I would say, from a fear of "losing" a leading light unrecognized by academic science, but also the central press.

How much one reads, receiving quite a large number of letters with absurd proposals for the treatment of many and, sometimes, all diseases. Nearly every influenzal epidemic is accompanied by letters proposing means for the treatment and prophylaxis of influenza, starting with the drinking of soda and ending with intricate techniques for blowing one's nose. Frequently the authors of these letters are engineers, physicists and chemists. These people can give a pseudoscientific basis for their fantastic ideas, showing a total ignorance of physiology and medicine.

Finally, there are also encountered "natural" quacks, that is to say, from the rough, who do not have, even an elementary knowledge of the field of medicine. It would be all right if these were herbalists, possessing some fragments of folk knowledge on the use of medicinal plants, but most often they are greedy ignoramuses and money-grubbers, who inflict great harm and frequently are direct culprits in the death of trusting patients.

How to explain the vigor of nonscientific doctoring, starting with homeopathy and ending with vulgar quackery?

It is easiest to consider it as a survival of capitalism. In fact, it flourishes profusely in the West. The USA, for example, has broken all records in this respect. It seems, however, that in our nation the roots of nonscientific doctoring are elsewhere. It is apparent to me that there are several reasons for this phenomenon.

Firstly, there are still many situations where scientific medicine, if not helpless, is not strong. Not finding help in scientific medicine, a patient next turns to healers of various types. I recall an acquaintance who suffered from cancer of the ovary. The case had been neglected, and medicine did everything possible (the patient was treated at an oncological scientific center), prolonging her life by at least three to four years. But when it became clear both to the attending physicians and to the patient herself that the sad end was near, the patient turned to homeopaths and even sought out meetings with the Kaluga inventor of the anti-cancer vaccine, although she was herself an educated physician....

The second reason: somehow many people believe that a radical method for treating virtually any disease can be very simple; it is necessary only to find it.

Nonphysicians especially often suffer from this. I recall a conversation that I somehow happened to have with a rather responsible worker. He persistently sought support for a certain quack who treated cancer patients. Insofar as the activity of the quack had by that time been cut short, my visitor asked me to take him under protection (at that time I worked at the USSR Ministry of Health), justifying his request by the fact that this quack, he said, cured many hopeless patients. I patiently pointed out that an investigation showed the opposite: the quack destroyed many patients that might have been saved. When my arguments proved unsuccessful I said: "OK, but do a favor for a favor. I have a metal-worker acquaintance who has constructed a rocket from tin-plate for a flight to Mars. Help him complete his invention." "You laugh?" said my interlocutor taking offense, "I am laughing," I answered him. "But are you really saying all this seriously? Do you seriously think that the human body is more simply constructed than a rocket?" With this our argument ended.

The third cause of the vigor of nonscientific medicine is that success is given to its priests by the psychotherapeutic effect of their "treatment". Naturally, such instances are proclaimed by the quack and are spread by the satisfied patient. The isolated successes of the psychotherapeutic effect must be paid for by the health and sometimes the lives of a much larger number of people. With regard to psychotherapy--however important it may be, it still has a narrowly-circumscribed range of application.

The fourth cause is the fact that in spite of all the successes of our health care, there are still instances of neglect by the physician for the patient, a formal-bureaucratic attitude to the patient by the supervisors of therapeutic-prophylactic institutions, defects in the organization of the work of poly-clinics and hospitals and defects in the work of middle and junior medical personnel. All this was discussed at both the 26th CPSU Congress and in the last two resolutions of the CPSU Central Committee and USSR Council of Ministers devoted to the development of health care. All these defects frequently drive the patient into the arms of a quack. The latter usually finds the appropriate techniques for behaving.

Finally, there should be noted still another reason why nonscientific medicine has put down rather deep roots in our nation. This reason I see in the categorical denial of certain methods of treatment, in particular acupuncture. Such a denial, occurring in the recent past, has undermined the faith of patients in scientific medicine.

All these circumstances created and continue to create the unique "ecological niche" of which I spoke earlier. Nature does not permit a vaccum, and therefore the "niche" is filled by nonscientific doctoring of the most various persuasion: here, in this "niche" you will encounter both the homeopath and the physician that has gone astray, both the ignorant prophet and the greedy quack-criminal....

The struggle with nonscientific doctoring must consist primarily in the improvement of the work of all health-care components. Especially the local and primary component--the polyclinics and hospitals and dispensaries; and, also it must consist in the intensification of the scientific propaganda of medical knowledge and in the education of the Soviet people starting with school age. We are called to this by decisions of the party and state. This is a fundamental route for the liquidation of nonscientific doctoring, for smoking it out of an "ecological niche" that in time must be completely occupied by a genuinely-scientific health care, permeated by a true concern for mankind.

NOTE: The problem raised in the present article were a subject of discussion at a "round table" held at the editorial office. Participating in it were physicians, biologists, philosophers and writers. The materials of the "round table" will be published in a subsequent issue of the paper.

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COMBINED PROGRAM FOR FURTHER IMPROVEMENT OF PUBLIC HEALTH CARE

Moscow MEDITSINSKAYA RADIOLOGIYA in Russian No 12, Dec 82 (signed to press 18 Nov 82) pp 5-8

[Article by V. V. Yermakov and V. P. Meleshko, First Moscow Medical Institute imeni I. M. Sechenov]

[Text] Our country is celebrating the 60th anniversary of formation of the Union of Soviet Socialist Republics in an atmosphere of national work and political enthusiasm, inspired by the decisions of the 26th CPSU Congress, November (1981) Plenum of the CPSU Central Committee and keynote speech at this plenum of comrade L. I. Brezhnev, general secretary of the CPSU Central Committee, chairman of the Presidium of the USSR Supreme Soviet, in which he defined the strategy for economic and social development.

Ratification of the Declaration on Formation of the USSR at the First Congress of USSR Soviets on 30 Dec 1922 was an extremely important historic event; it was effected under the leadership of V. I. Lenin. Soviet public health care grew and strengthened together with the entire country.

The attention of the CPSU and Soviet government was constantly centered on concern about the health of the Soviet people, further development and upgrading of medical care of the public.

In view of intensification of industrial and agricultural production, as well as accelerated growth of productivity of labor, the importance of public health care, a system that is instrumental in safeguarding the health of the working people, increased in all Union republics.

Thanks to Lenin's national policy implemented by the CPSU, availability of physicians and hospital beds is constantly increasing in the republics; the indicators of morbidity and disability are dropping, the standards of medical-diagnostic and preventive care are rising.

Thus, in the years of the 10th Five-Year Plan alone, large hospitals with 600-1000 or more beds each were started up in Kishinev, Minsk, Vilnius, Frunze and Yerevan. The highest indicators for providing the public with physicians and beds were reached in Latvia and Kazakh Union Republics and the RSFSR.

The rate of increase in number of physicians and paramedical personnel in republics of Central Asia is considerably ahead of the increment in the nation as a whole.

There are departments of preventive and reconstructive care in polyclinics of many oblasts and cities of RSFSR, the Ukrainian, Belorussian, Latvian, Uzbek and other Union republics. Hospitals (or departments) of reconstructive therapy as one of the stages of hospital treatment have been organized in several Union republics.

High indicators for scope and quality of outpatient care have been achieved in Belorussia, Latvia, Lithuania and other Union republics.

New institutes for mother and child care have been organized in the RSFSR, Tajik and Turkmen Union republics.

Eleven scientific research institutes of cardiology have been founded in the Union republics, which integrate research in accordance with the All-Union program for the control of cardiovascular diseases.

Organization of the Siberian Department of the USSR Academy of Medical Sciences, establishment of branches of chief scientific research institutes in the republics were important to development of medical science in the eastern parts of our country.

In order to expand and upgrade physician training, 6 new pediatric and 10 stomatological faculties were organized, as well as institutes for advanced training, in Penza, Irkutsk and 12 new faculties for advanced training. A unified system was developed for advanced training of medical personnel with secondary and pharmaceutical education.

There are plans for further expansion of sanatorium-resort institutions, as well as construction of new resorts, in the Union republics.

Allocations are constantly growing for public health care, development of the network of therapeutic and preventive care institutions, which constituted 66 billion rubles on the state budget alone under the years of the 10th Five-Year Plan, which is 14 billion more than under the 9th Five-Year Plan.

Implementation of the measures provided in the decree adopted in 1977 by the CPSU Central Committee and USSR Council of Ministers, "On Measures for Further Improvement of Public Health Care," has borne fruit. The tasks of the 10th Five-Year Plan pertaining to development of material, scientific and manpower potential of public health care and the medical industry have been fulfilled, and for some indicators they were overfulfilled.

A combined program for further refinement of medical care of our people has been outlined in the "Basic Directions of Economic and Social Development of the USSR in 1981-1985 and up to 1990," which was approved by the 26th CPSU Congress.

Public health agencies and the entire medical community consider this to be their main task, being impressed with the importance of the words of comrade

L. I. Brezhnev, to the effect that "there is no more important social task than concern about the health of the Soviet people."\*

The All-Union aktiv of public health workers, which convened on 10 December 1981, warmly supported the Peace Program, the wise policy of our party, its Central Committee and Politburo of the CPSU Central Committee, as vividly confirmed by the work of the Soviet committee of "Physicians for the Prevention of Nuclear War."

The right of Soviet citizens to health protection in our country is validated in the Constitution of the USSR. This right is provided by free and qualified medical care, expansion of the network of state public health institutions, development and refinement of labor safety practices and industrial sanitation, implementation of extensive preventive measures, amelioration of the environment, special concern about the health of the growing generation and women, development of scientific research on prevention and reduction of morbidity, disability, mortality and prolonging active longevity of citizens.

The standards and quality of medical and drug care are continuing to improve, the material and technical base of public health is strengthening and medical science is developing in the USSR under the guidance of party and soviet agencies, with the active participation of the community.

At the start of the 11th Five-Year Plan, bed resources of hospitals constituted 3,324,000, or 125 beds/10,000 population, which is 9% more than outlined in the plans. The plan for construction of polyclinic institutions was overfulfilled by 51% while the plan for capital investment in public health care was exceeded by 26.4%.

There has been expansion of scope and improvement of quality of outpatient polyclinic care. The number of visits to physicians has increased by an average of 11% per urban resident and 23% per rural inhabitant. Steps are being taken to subdivide territorial pediatric districts, man them with physicians and paramedical personnel.

At the present time there are about 36,000 outpatient-polyclinic institutions in our country, which are visited daily by 8.5 million people. Measures to organize services to the public, refine management of medical personnel work are being constantly developed and implemented in the practice of polyclinic operation.

As a result of the great work done to train and provide qualified personnel to public health, the number of physicians has reached 996,000, with 2.8 million paramedical personnel, or 37 physicians and 105 workers with secondary medical education per 10,000 population.

Medical institutions of Siberia, the Far East, Nonchernozem Zone of RSFSR, Kazakhstan and Central Asia are better provided with medical personnel.

\*L. I. Brezhnev, "Following Lenin's Course," Moscow, Politizdat, Vol 5, 1976, p 494.

Work is improving in the area of advanced training of physicians, pharmacists and paramedical personnel.

The needs of the public and medical institutions are being better met, with respect to medical equipment and drugs. The number of pharmacies has increased by 26,600, i.e., by almost 10%.

Ambulance and emergency care have been unified in order to further develop and improve emergency medical care of the public, and this service rendered care to 85 million patients in 1980. A total of 85 emergency medical hospitals have been organized, and they are entirely up to date, meeting current requirements as to type of therapeutic institution. Capital construction of new therapeutic-preventive institutions is improving and growing. Specialization of hospital and extramural care--cardiological, ophthalmological, pulmonological, nephrological, etc.--is undergoing intensive development and deepening.

Implementation of measures to improve medical care of the rural population is important; they provide for further approximation of levels of services to the urban and rural population, such as development and strengthening of the material and technical base of central rayon and oblast hospitals, the process of enlarging and specializing them.

As a result of socioeconomic transformations, improvement of forms and methods of work, as well as of quality of medical care, good results were obtained with regard to health status of the people.

Thus, temporary disability decreased, in the years of the 10th Five-Year Plan alone, by 11.5% in cases and 8.1% in days; primary disability decreased by 8.3%, and there has been a decline of indicators of mother and infant mortality, and birthrate has increased.

Dispensary care of the public, as one of the most important tasks spelled out by the 26th CPSU Congress has undergone further development. In 1980 alone, 112.5 million people were submitted to preventive physicals, and there were 45 million patients on the dispensary rolls.

Since 1982, the USSR Ministry of Health is implementing measures at a number of large hospitals to intensify their operation, financing drug expenses on the basis of estimation per patient, rather than per bed-day, in order to improve the efficiency of utilizing hospital bed resources. There are provisions for further development of the principle of economic [financial] incentives for medical personnel work.

The order of the USSR Ministry of Health, No 1000 dated 23 September 1981, "Measures to Upgrade Organization of Outpatient-Polyclinic Institutions," was very important to refining and upgrading the quality of outpatient polyclinic care; according to this order, the network and structure of polyclinics are being revised in order to enlarge and specialize them, organize polyclinics for consultant and diagnostic services, departments of preventive care and other measures.

All this is indicative of the significant progress made by public health care in our country.

Along with these positive results, there are still many flaws in the area of public health care, as was noted in the proceedings of the 26th CPSU Congress. The work of polyclinics, dispensaries and walk-in facilities, in which 80% of all the sick are treated, must be improved substantially.

Among the most important tasks that medical workers are called upon to perform are expansion and refinement of preventive care, improvement of effectiveness of dispensary care, scientific organization of labor in therapeutic and preventive institutions, hygienic education of the public, campaigning about healthy life-style as an element of a socialistic life-style. The sanitary and epidemiological service must improve sanitary surveillance of activities of industrial enterprises, public catering facilities, school and preschool institutions, and environmental protection.

In the area of medical science, special-purpose programmed planning must become the basis for effective research, pertaining, first of all, to development and introduction to practice of new methods and forms of prevention and treatment of cardiovascular diseases, mother and infant diseases, malignant neoplasms, mental and hereditary diseases.

It is necessary to expand scientific research on development of demographic forecasts, methods of determining the public's optimum requirements in various forms of medical care, systems of planning the activities of public health institutions and automated control systems.

As noted by Leonid Il'ich Brezhnev, the main task is "... to do everything so that the Soviet people could receive prompt, qualified and compassionate medical care."\*

Medical workers are deeply and firmly resolved to do everything to make new advances in the important cause of safeguarding the health of the Soviet people and fulfilling the tasks put to public health by the 26th CPSU Congress in the year of the 60th anniversary of formation of the USSR.

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\*"Proceedings of 26th CPSU Congress," Moscow, Politizdat, 1981, p 64.

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PLENUM OF PROBLEM COMMISSION 'PROBLEMS IN VITAMINOLOGY'

Moscow VOPROSY PITANIYA in Russian No 4, Jul-Aug 82 pp 76-77

[Article by N. V. Blazheyevich, scientific secretary of the problem commission "Problems in Vitaminology", Moscow]

[Text] A plenum of the problem commission "Problems in Vitaminology", Presidium of the USSR Academy of Medical Sciences, was held on 22-24 October 1981 in L'vov.

The plenum was devoted to the problem topic "Vitamin Supply and Vitaminization of the USSR Population". Participating in the work of the plenum, in addition to the members of the problem commission, were leading specialists in the field of vitaminology and nutritional hygiene from various regions of the nation, including the Russian Federation, Ukraine, Belorussia, Georgia and Azerbaijan; a total of about 80 people.

Reports were heard and discussed at the plenum, generalizing the results of investigations of the vitamin supply of representative groups of the population in various regions of the Soviet Union. The plenum also examined the project of the all-union target program "Evaluation of Vitamin Supply and Vitaminization of the USSR Population".

An analysis of the material presented at the plenum indicates that, in spite of considerable successes in rational nutrition, the problem of deficient supply of individual population groups with certain vitamins remains acute. A deficient intake of ascorbic acid, thiamine, riboflavin and niacin was found when the supply of individual occupational groups in the population was studied in a number of the nation's regions.

Deficient vitamin supply is explained not only by departures of the actual nutrition from physiological norms but also by a decline in the daily caloric content of the food, caused by the decline in the energy expenditure of modern man and, also by the increase in the proportion of refined products subjected to technological processing in canned products poor in vitamins and other essential food substances.

A deficient vitamin supply lowers a person's work capacity and resistance to infections, prolongs the course of various illnesses and creates the threat of development of more profound disturbances in metabolism.

A most important role in the massive prophylaxis of vitamin deficiency under the conditions of the entire nation is filled by vitaminization of products of mass consumption (flour, sugar, milk, juice) with the principal vitamins and mineral substances whose deficiency is encountered most frequently.

The implementation of vitaminization in our nation is in large measure restrained by the insufficient volume of the commercial production of vitamins and vitamin preparations, by the absence of an authoritative organ capable of organizing and coordinating the activity of various organizations and departments for implementing the vitaminization of food products.

The Resolution of the CPSU Central Committee and the USSR Council of Ministers of 14 January 1960 "On Measures for the Further Improvement of the Medical Service and Health Care of the USSR Population" and the order of the USSR Ministry of Health of 24 August 1972, stipulating the vitaminization of flour with B<sub>1</sub>, B<sub>2</sub> and PP vitamins and, also, the vitaminization of prepared dishes in the public-nutrition system and vitamin C, have not been fully implemented.

The plenum noted a number of concrete measures aimed at further developing and improving vitaminization in our nation. In the resolution adopted by the plenum, the need was indicated for a comprehensive verification of the implementation of the Resolution of the CPSU Central Committee and the USSR Council of Ministers of 14 January 1960 and the order of the USSR Ministry of Health of 24 August 1972, as well as the desirability of preparing a new expanded resolution on vitaminization.

The plenum stressed the need for creating an authoritative interdepartmental commission, involving representatives of the USSR Academy of Medical Sciences, Gosplan, the USSR Ministry of Health and ministers of the medical industry, finances, procurements and the meat-dairy and food industries for planning, coordinating and monitoring the implementation of vitaminization.

The plenum pointed out the need for significant expansion of investigations of vitamin supply of the population's principal occupational groups in newly settled and developing industrial and agricultural regions in Siberia, Central Asia, the Far East and North and, also, for the vitamin supply of children of preschool and school age, pupils at professional-technical institutes and technicums, students and pregnant and nursing women. In conducting the investigations, it is desirable to determine provision not only the usual assortment of vitamins (A, C, B<sub>1</sub>, B<sub>2</sub>, niacin) but also folic acid and vitamins E and D.

The plenum considered it necessary to expand considerably the work on the improvement and standardization of criteria and methods for assaying the vitamin supply of man and indicated the need for preparing an appropriate handbook and for conducting school-seminars.

The plenum approved, in consideration of the preceding comments, the project of the all-union program "Evaluation of Vitamin Supply and Vitaminization of the USSR Population", whose goal is scientific substantiation and development of methods for vitaminization and, also, rendering of assistance to executive organs in its planning and implementation.

The next plenum of the problem commission "Problems in Vitaminology", scheduled for 1982-1983, is expected to deal with questions of clinical vitaminology.

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WAYS OF IMPROVING SCIENTIFIC RESEARCH WORK AND TRAINING AND RETRAINING OF PERSONNEL FOR MASS PHYSICAL CULTURE FOR THE ADULT POPULATION

Moscow TEORIYA I PRAKTIKA FIZICHESKOY KUL'TURY in Russian No 11 Nov 82  
pp 38-41

GONIYANTS, S. A., candidate of pedagogical sciences, and PETRACHEV, M. A.  
Moscow Institute of Engineers of Civil Aviation

[Abstract] Scientific reports deposited with the All-Union Scientific-Technical Information Center [VNITs] during the period 1940-1981 and dealing with physical culture are reviewed and analyzed. Two ranges of questions are distinguished in physical culture for adults: what is the initial level of physical fitness required for individuals to engage in physical activities? What are the organizational methods that should be employed to educate individuals to engage in independent physical fitness programs? Examination of scientific papers deposited with VNITs since 1976 shows that scant attention has been given to these problems; most work deals with physical education for VUZ students only. Moreover, despite the great attention given to the training of sportsmen in departments of physical culture, no attempt has been made to establish the scientific bases for mass physical culture among adults, even though a large proportion of VUZ students are adults; few experimental data are available. It is suggested that programs to study mass physical culture for adults be set up within the framework of institutes of physical culture, which could also train and retrain physical education specialists; this work, however, will be hampered by the lack of theoretical information on the subject. The USSR State Committee for Physical Culture and Sports should cooperate with appropriate scientific and training establishments to generalize and analyze such information as is already available and proceed from there. No references.  
[153-9642]

COMBATTING SMOKING: AN IMPORTANT AND URGENT MATTER

Moscow TEORIYA I PRAKTIKA FIZICHESKOY KUL'TURY in Russian No 11, Nov 82  
(signed to press 4 Oct 82) pp 55-57

SEDOV, A. A., All-Union Scientific Research Institute of Physical Culture

[Abstract] The dangers of tobacco smoking to health are illustrated through copious statistics from the West on smoking habits and details on the social, biochemical and pathologic consequences of the use of tobacco. Results from a WHO world survey of tobacco smoking are summarized. Steps taken in the USSR to discourage smoking are briefly listed: the Ministry of Health has set up a permanent group to head up work to combat smoking; scientific research institutes have been seeking more effective methods to treat toxicoomania; advertising of tobacco products and the sale of tobacco to minors have been banned. No references.

[153-9642]

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DEVELOPMENT OF SPECIALIZED MEDICAL FACILITIES IN OBLAST, KRAY AND REPUBLIC (ASSR) CENTERS

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 8, Aug 82  
(manuscript received 21 Aug 81) pp 6-9

KAMALOV, M. Kh., Ministry of Health, KUVATOVA, G. G. head physician of the republic clinical hospital and PETROV, M. K. doctor of medical sciences, Bashkir ASSR Ministry of Health

[Abstract] Responding to decisions of the 26th CPSU Congress in the public health sphere, plans are being drawn within the Bashkir ASSR to improve medical facilities. The following details are provided: the Republic Clinical Hospital operates a polyclinic offering facilities in 46 different spheres of medicine, and the 23 clinical departments at the hospital have a total of 1,120 beds; seven branches of the Bashkir Medical Institute function in the facilities of this hospital, and a special orthopedic branch was opened in 1981. Other medical facilities available in the republic include the republic pediatric hospital (525 beds), the republic oncologic clinic (650 beds), the republic psychiatric hospital (2,900 beds), the republic tuberculosis clinic (400 beds), the Research Institute of Labor Hygiene and Occupational Diseases (160 beds), the Ufa Scientific Research Institute for Eye Diseases (300 beds), and the republic skin and Venereology clinic (325 beds). The organization of medical facilities within the Bashkir ASSR is effected in accordance with the "Comprehensive Plan for Joint Work by the Bashkir ASSR Ministry of Health and the Bashkir Medical and Scientific Research Institutes for Medical and Sanitation Services for the Population of the Bashkir ASSR." Statistics are provided on the availability of medical services in the Bashkir ASSR (hospital

beds, physicians by specialty, outpatient clinics, gynecological services, tuberculosis clinics) and various health statistics (pregnancy-associated disease and mortality, invalids, cancer, research work, epidemiology). No references.

[175-9642]

ROLE OF SOCIAL HYGIENE FACTORS IN DEVELOPMENT OF CHRONIC NONSPECIFIC RESPIRATORY DISEASE

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 8, Aug 82  
(manuscript received 23 Nov 81) pp 20-22

IZMAYLOV, V. I., Department of Social Hygiene of Organization of Health Care, Izhevsk Medical Institute

[Abstract] The high incidence of chronic nonspecific respiratory diseases with loss of working time and the danger of their development into acute forms prompted a study to clarify the role of social-hygiene factors in this pathology. A total of 587 patients with a diagnosis of chronic nonspecific respiratory disease completed questionnaires concerning four periods of their lives: childhood, the period of their education and professional training, the first period of their labor activity (up to age 40), the second period of their labor activity (older than 40 until retirement). Subjects were working at 73 different urban enterprises and establishments; they included 64.2% blue-collar workers, 26.1% white-collar workers, and 9.7% others. Ages varied between 15 and 59, with 50.5% men and 49.5% women. Details of family situation and income were recorded. Comparison of the distribution of chronic nonspecific respiratory diseases in patients and a control group were done using the chi-square test and the Student t test. Analysis of questionnaires showed that 25 factors (51.1% of the number covered in the program) were common to all subjects. Factors were divided into those concerned with professional activities and those concerned with the domestic situation. The results indicated that lower-paid, blue-collar workers working in harmful work conditions engaged in manual labor and suffering emotional stress tended to suffer more from chronic nonspecific respiratory diseases than subjects in other groups. Analysis of the risk factors involved (shown in a detailed table) showed that improved medical services, including stricter control of the production environment, public education and improved convalescence for patients, could improve the situation. No references.

[175-9642]

PHYSICAL DEVELOPMENT OF INFANTS OF BREAST-FEEDING AGE FED ON SUBSTITUTE FORMULAS

Kishinev ZDRAVOOKHRANENIYE in Russian No 4, Jul-Aug 82 (manuscript received 7 Dec 81) pp 20-24

GUTSUL, T. L., LAZAREV, S. G. and GRINSHPUN, B. L., Pediatric Department, Faculty of Advanced Training of Physicians, Kishinev Rayon Hospital, Rybnitskaya

[Abstract] A total of 317 infants were studied during the period 1976-1978 to clarify differences in physical and neurological development that might occur between breast-fed infants and infants receiving substitute formulas. Infants were divided into three groups: group 1 was breast fed (107, controls); group 2 infants received "Malyutka" and "Malysh" substitute formulas (107); group 3 received "traditional mixtures" of mother's milk and substitute formula (105). [Figures as published] Dynamic studies were done on the following physical parameters: body weight, body length, circumference of head, circumference of chest, eruption of teeth, closure of anterior fontanelle, sitting, walking, speech. By the end of the first year of life infants fed artificial formulas had a greater body weight and length than those who were breast fed; anthropometric indices were close for infants fed with "Malyutka" and "Malysh" formulas. Development of psychomotor responses was slightly faster in breast-fed infants. Earlier closure of the anterior fontanelle and later eruption of the teeth was noted in infants receiving substitute formulas. Exudative diathesis was seen more often in infants receiving "traditional mixtures." References 10 (Russian).

[176-9642]

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